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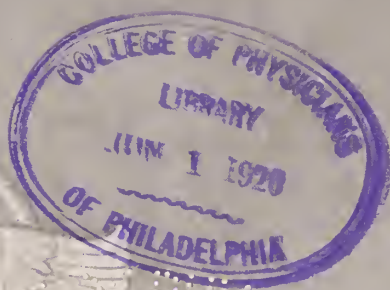
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THE EDITOR

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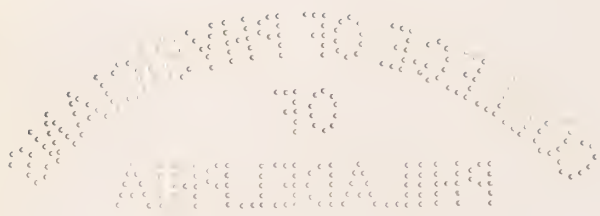


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THE JOURNAL OF
OPHTHALMOLOGY
OTOLOGY
AND
LARYNGOLOGY



PHYSICIANS
OF
PHILADELPHIA



Journal of Ophthalmology Otology and Laryngology

Vol. XXIV

JANUARY, 1920

No. 1

Editorial

THE JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY resumes publication after a suspension of two years because of H. C. L. The JOURNAL is revived at this time owing to the ever-increasing demand for it by its subscribers, many of whom have been away in the service of Uncle Sam and have since returned to civil life. The subscribers by their numerous appeals have convinced us that there is a real demand for the O., O., AND L. JOURNAL.

During the last few years medical journalism has suffered considerably because of the increased cost of publication and the falling off in subscription lists, the latter on account of the absence of physicians in the service. To meet this condition of affairs medical journals generally were compelled to do one of several things,—increase the price of subscription, reduce the size of their issues, or amalgamate two or more of a similar kind. Amalgamation had the advantage of increasing the total number of subscriptions, for the reason that many subscribers for special journals who could afford to subscribe for a few could not for all. The pooling of interests on the part of the journals had the effect, too, of eliminating competition, which in turn allowed for raising the price of a combined journal.

The medical journals were put in such a position that they had to fight for their very existence, particularly those devoted exclusively to one of the specialties, since the number of possible subscribers was more limited than in the case of journals dealing with general medicine. Each journal did the best it could under the circumstances to keep alive the spirit of medical journalism in the particular field to which it was devoted. None of them was inspired with a desire for

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monetary profit. It was devotion to a cause that kept medical journalism alive and where it is to-day.

The readers of medical journals appreciate this fact, and have shown their appreciation and loyalty by continuing their subscriptions during the period of general prosperity that has omitted the medical man and medical journals, excepting indirectly, as prosperity affecting one class is bound, somewhat, to be reflected as a force beneficial to other classes. The word "somewhat" is used advisedly, for most of the benefits are absorbed by the class directly affected, while a small fraction is reflected as in the case of the solar rays when they happen to fall upon a piece of dull black cloth.

As previously stated, the O., O. AND L. JOURNAL resumes its publication because its subscribers have convinced us of a real demand for it, as manifested by the numerous complimentary letters received, and we promise to do all in our power to give our subscribers as good if not a better JOURNAL than ever before.

We wish you all a happy and prosperous New Year.—G. W. M.

HIGH WAGES AND THE DOCTOR.

THIS is a question that is possible of discussion from many angles and one which the medical profession will do well to consider in their society meetings. That labor unions have been guilty of profiteering is putting it mildly. Those of us who have been forced for one reason or another to depend upon union labor bear witness to the fact that as a class they are a gouging and insolent lot. If one of us were to act toward any of them as they are accustomed to act toward us, the laborer would not tolerate it. He would promptly discharge the M. D. and call in another more considerate. No one could blame him. The union laborer is in a position to change doctors whenever he pleases because he can always find another to take the place of the last one, while we cannot do the same with the union laborer. A restraint is put upon all of us who must occasionally employ laborers, and at the same time we cannot restrain the laborer when it comes to his employing a doctor. This is unfair, yet these same union laborers are fellows who are complaining most bitterly about

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our Government, or form of government, not being just or democratic enough.

A specific instance of the unfairness of the laborer was recently cited by an eye specialist connected with one of the clinics of a large hospital in Philadelphia. He was telling a group of doctors about a case of a Hog Island riveter who brought his child to the clinic for free treatment. On learning all the facts in the case the eye specialist refused to treat the patient as a charity one, on the ground that the man could afford to pay for private treatment. Whereupon the union laborer, who was drawing more than fifty dollars a week at the shipyard, reminded the doctor that the hospital dispensary was receiving State aid for the purpose of treating charity patients. Strange to say, some of the medical men who heard the story sided with the union laborer, while more of them supported the stand the doctor had taken.

Verily, this country is fast becoming a place where we shall witness a government of the labor union for the labor union and by the labor union instead of what men like Lincoln, Roosevelt and Coolidge would have it.

G. W. M.

CORRESPONDENCE BETWEEN DR. PHILIP RICE AND THE EDITOR.

Dec. 7, 1919.

My dear Dr. Mackenzie:

I am sending you herewith something which you may be able to use in the editorial section of the January issue of the resurrected JOURNAL. If it does not suit don't hesitate to say so and return it to me. My idea in sending this is that we, as a profession, may begin to think along some other line than that which we have been thinking in for so long a time that thinking has quite ceased altogether and action has become automatic. We are in a terrible rut we must admit. We must get out of it or we will soon be called on to witness the mournful spectacle of the final curtain and the lights turned out. Let me assure you I am ready and willing to do all that lies in my power to assist in making the JOURNAL a real success. I hope soon to have

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certain matters in such shape that I may begin definite research work along the line of *Materia Medica*.

With cordial good wishes I am,

Cordially yours,

PHILIP RICE.

My dear Dr. Mackenzie:

Concerning the wisdom of re-establishing the O., O. AND L. JOURNAL let me say that in my opinion this is open to question. What is the object in view? that is to say, what do you purpose to publish in it? Is it to be simply a medium of exchange of the ordinary experiences? a journal in which will appear the usual type of article telling the medical world of our successes and failures with the methods of treatment generally in vogue and telling of our hopes concerning our hobbies? Or will it contain articles that will be a real contribution to Science; that will deal, in a measure at least, with the philosophical side of the fundamentals underlying our experiences and problems; that will give evidence that we are doing serious research work along some definite line? Which is it to be? If the former is all the JOURNAL is to be, then I think the effort spent on it will be wasted, be energy thrown away. But if it is going to be something along the lines of the latter suggestion, then by all means let us have it at once. There is great need of work of the latter kind, and, naturally, need for a suitable journal in which to publish the results of our labors.

You, I am sure, admit that the average medical journal cannot be defended on the ground of its weighty contents, that is, applauded for what it contains of a truly scientific character. Seldom does it contain anything beyond a record of experiments, which are invariably still in embryo, and impressions and theories based very largely on assumed and imagined facts. Rarely does it contain anything that approaches even remotely a philosophical discussion of the *principles* underlying the facts of our daily experiences and problems. And what is the net result at the end of a year? Little or nothing! A Harvard professor once made the remark that if he had his way about it every medical work would be destroyed the day it was three years old. What a sad commentary on our medical literature! And what conclusion is it possible for us to form if this is a just appraisal of its value?

None other than what we publish, both in books and journals, has no value the day it comes off the press! That this professor's estimate is about correct is shown by the cynical disregard which medical men generally show for last year's medical journals.

But some one may say, "What else is there for us specialists to do?" Well, suppose we devote a good part of each issue of the JOURNAL to a discussion of the problem of how to improve the *materia medica*, in its construction, in the method of study and of teaching, a philosophical study of the principles underlying drug action in order that we may some time come to a point where we are able to explain in a rational way our failures as well as our successes (at present we are unable to explain either), try to see if we shall be able to discard a good part of this overpowering mass of symptoms which now paralyzes our senses the moment we begin to study, devote some careful thought to the study of the organization of the human individual that we may gain some understanding of the mysteries of predisposition and susceptibility, that is, gain some insight into the reasons why under identical conditions the same things do not take place either physiologically or pathologically in two or more individuals,—suppose, I say, we should do some of these things in a thoroughly scientific manner and publish the results from month to month for a year; does anyone doubt but that medical science would be far richer than a year of the usual kind of effort leaves it? Stereotyped effort for something like fifty years in nearly a score of homœopathic colleges, with almost that same number of medical journals of the stereotyped order have brought us to what? Practical bankruptcy!

Now the question arises, quite naturally, are the members of the profession ready to do this kind of work? Obviously it cannot be left to the editor. Have we the men who are able or in a position or inclined to undertake a task of the character suggested? I admit I do not know. I want to believe that we have hundreds in the profession able to do so. If I am mistaken then out of regard for what is modest and sincere we should refrain from appearing on the public stage until we are qualified to appear. We are striving to maintain homœopathic colleges, journals and societies. How can we hope to do this successfully if we are not qualified? Or if qualified, devote so little time to research and study along the line of those principles on which these

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various interests are founded? It is doubtful if any subject receives so little consideration in our medical colleges as does that which is the very heart and soul of the school. If you and those associated with you in the effort to re-establish the JOURNAL purpose making the *principles* of Homœopathy the dominating feature, or at least, a prominent feature, then by all means let us begin at once. All success to you, my dear doctor, in your undertaking.

Cordially and fraternally yours,

PHILIP RICE.

240 Stockton St., San Francisco,

December 6, 1919.

Dec. 15, 1919.

My dear Doctor Rice:

Your letter of December 7th in reply to mine of former date just received. I appreciate the favor because, first, it was a *prompt* reply, and, secondly, because of the tone of sincerity manifested throughout its contents. These two admirable qualities you have consistently manifested in the past. The editorial that you have enclosed will appear in the January issue, the subject matter of which it shall be my pleasure to comment on in subsequent issues of the JOURNAL: furthermore, may we have more of the same stuff from you from time to time, as your convenience will permit?

Sincerely yours,

G. W. M.

PRESIDENT'S ADDRESS DELIVERED AT THE
THIRTY-SECOND ANNUAL MEETING OF
THE O., O. AND L. SOCIETY, ASBURY
PARK, N. J., JUNE 16, 1919.

IRA O. DENMAN, M. D.,

Toledo, Ohio.

Fellow Members of the O., O. and L. Society:

As I address you upon the thirty-first anniversary of the founding of this Society, my first thought is to give full expression to the deep appreciation of the honor which you have conferred upon me in elevating me to the presidency of our Society. This expression is not merely a stereotyped phrase, conventional in character, but rather sincere and genuine for many reasons. The fact that I stand before you now as a representative of the only Homœopathic Society of specialists in the world is significant, but not alone does it measure the honor of the position. The long list of my distinguished predecessors, the record of scientific achievement of the Society, its long and conspicuously useful career, are all factors which combine to honor him who is chosen to direct its destiny for any annual period.

As our American Constitution has so wisely provided for our President to address a message to the Congress assembled, acquainting it with the affairs of State which, owing to his constant, intimate information may be best known to him, and making recommendation to them for guidance in their deliberations, so our Society has been accustomed to hear its President speak to it at its Annual Convention.

It is, therefore, my privilege as well as my duty to-day to address you. While precedent has allowed me wide latitude and perfect freedom in my choice of subject, and though there are many avenues of scientific research into which I might possibly lead you with profit and interest, I deem it my duty to speak to you of matters which have to do with the welfare and perpetuity of our beloved Society, and of the science of medicine as a whole, upon whose sure foundation we are destined to stand or fall. In these troublesome times when

the whole world is aflame, but recently scourged by the greatest conflict of all history, the earth still rocking from the horrible upheaval, no line of human endeavor is immune from its unstabilizing influence. The physician is either unobserving or wholly indifferent who does not read in the black cloud of Socialism a menace to the continuance of the freedom which the American doctor has enjoyed in the study and practice of his profession. There are those in this country who through legislation would force upon us, by means of health insurance and other measures of state control, a pernicious system which has proven a failure in European countries after its fangs had sunk deeply into the body politic of the medical profession. These measures would make the doctor a hired man to keep the people well and pay him a pittance therefor. Recent reliable information is that under this system the number of patients apportioned to a single doctor reaches two hundred a day, and the remuneration is from one and one-half cents to three cents per prescription. A health insurance bill is pending in the Ohio legislature, with every prospect of its passage.

The moment the members of our ancient and honorable profession become mere hirelings, that moment marks the end of progress in achievement of scientific facts and methods, which to-day stands without a parallel. I do not need to recite to you, my colleagues, the evidences of greatness to which we have attained. In the succeeding days of the World War, in which all scientific departments of medicine and surgery have played such conspicuous and indispensable roles, our profession has commanded the respect and esteem of all men everywhere. Not only on the battle field was it indispensable, but in the quiet yet none the less important reconstructive work still being carried on does it make for the health, happiness and security of the world.

I believe that the degree of scientific proficiency to which our profession has attained has been rendered possible only by reason of the fact that we have been free agents, unhampered and unfettered by economic barriers and restrictions, in accomplishing all that skill and ingenuity can do for the alleviation of human suffering and the prolongation of human life. Make the doctor a hireling and all laudable ambition is throttled, incentive is smothered, progress halted, and retrogression inevitably will follow.

The problems vital to the medical profession as a whole must

not be ignored by us who are in special practice. The health and security of the branch depends upon the vigor of the trunk. Our duty to the parent tree is plain and imperative. I respectfully recommend to you therefore that this Society, in Annual Convention assembled, place itself upon record as being in opposition to any and all measures, national or state, which proposes national or state control of medical or surgical practice or the stipulation of its fees. Such action if taken may reach the legislatures of most of the states by each member of this Society personally presenting the same to his representative.

In support of the foregoing recommendation allow me to present as argument some observations and statistics. That there is prevalent in the minds of many medical men throughout the country an economic disquietude is evident from many sources. Much is found in current literature to support the assertion that many doctors are dissatisfied with their earnings. In the face of the present increased cost of living many doctors' fees are inadequate to meet their living expense. Others are not good collectors of incomes earned which would sufficiently remunerate them. As a result of this situation we find that many members of the medical profession who have met one or the other or both of the above misfortunes feel that they might be bettered financially by state control of medical practice whereby their fees, even though smaller than their present charges, would at least be surely and promptly paid by the state. As an example of this attitude of the medical mind allow me to quote from an article by an Ohio physician, recently appearing in a medical journal and given wide publicity by the *Literary Digest* for May, 1919. The *Digest* says: "A group of writers on 'socialized medicine' are making war on what they call 'the objectionable fee system,' which they consider fair neither to the physician nor patient. Bernard Shaw has had his say and Dr. Richard Cabot has expressed his opinion. Now comes Dr. Charles Elton Blanchard, of Youngstown, Ohio, who in a club paper read in his home city and printed in the *American Journal of Clinical Medicine*, paints the situation in colors that may be termed gloomy and lurid, according to the point of view. We have room only for his somewhat despairing picture of the status of the average modern doctor. The remedy, he thinks, is to 'socialize' medicine as we have

socialized the teacher, the policeman, and the postmaster; that is, by making the physician a public servant. He paints his picture of the 'average doctor' in the following words: 'Unless he is in public service or in the employ of some industry or holds some hospital staff position, or a specialist with established associations, he is having hard sledding to earn a living. Good authorities assert that the average income of doctors, little and big, is about \$750 a year. I have no way of proving this figure to be correct or incorrect. This is true, however; a doctor in general practice who may have been a good carpenter, bricklayer, butcher, or blacksmith, would have been financially better off had he been content to stay in the working class of physical labor.' Further on he says: 'Oh, there is nothing wrong with the system for exceptional men, that are lauded and applauded in hundreds of newspaper stories and in other free advertising. Nothing wrong for the little group of specialists in each center whose system of associates carries to them a nice cash business, on a silver server, as it were. Nothing wrong for the hospital surgeon that performs from one to a dozen major operations each day, many of which bring extra large fees. Nothing wrong for the man who can make his name a household word, by being elected coroner, health officer, or something. Now, these men, thus marked with favor in the system, as a rule, are competent men, often the best of good fellows, and are greatly shocked if any physician or layman has the temerity to criticize the system or medical service with all its glorious and traditional past.

" 'However, do you imagine that almost any of those average men, men always a little short of funds, a bit seedy, and discouraged, would not do as well, had they by any chance been afforded the opportunity? In fact, have you not noticed that those who have what they call 'push,' that is to say, that they push the other fellow out of the way, and self-assertion, meaning that they browbeat and bulldoze until people just have to make way for them, that these are the ones that get ahead? This probably is true as to lawyers and preachers, also, I know that it is true for doctors.' "

Fie, on the system! It is a relic of the dark ages. One prominent doctor, in a leading medical journal, said: "The present system of medical practice belongs to the stone age." I say to you, in face

of all medical laws, medical codes of ethics and scientific attainment, it is a system of dog eat dog.

As before stated the doctor's remedy is to abolish the medical fee and put the doctor on a salary as a public servant. And then we read further :

"These public health servants should be well paid, just as teachers ordinarily are well paid. They would have to make good or lose their jobs. Neglect of duty, loss of public confidence and good will, or any conduct derogatory to the welfare of the service would quickly replace any miscreants. Political partisanship should be entirely excluded from the department. After a certain number of years of successful service the doctor should be retired on a liberal pension, and either be of further use in counsel or be allowed to enjoy his declining years in such pastime as may appeal to him."

I say to you in all seriousness that we cannot close our eyes to a situation so menacing. There is no question but that there is something radically wrong with a system which generates such disquietude and tends to lead medical men away from the highest ideals of their profession. And I propose to indict as a thorn in the flesh, insufficient remuneration, small fees, always insufficient and held down by fee bills, itemized statements, and all such methods that tend to give the patient the idea that we sell our time by the hour on the American Federation of Labor plan. The altruistic age in medicine has largely passed. It takes dollars as well to meet the twentieth century demand. If there be those yet among you whose spines are made to shiver by the term, commercialized medicine, let them arise and tell us how they meet rent, living expenses, and so forth, by the free will offering of their grateful patients.

The relation between the modern doctor and his patient is two-fold. First, psychical and physical, and second, pecuniary. The former, the personal relation is, we all know, the most beautiful relationship in the whole world, outside one's own family ties. No other profession or calling, not even the clergy, can approach it. Such confidences are, as you know, held sacred to the extent that no court on earth can force the lock of this treasure strong box and divulge the secrets therein contained. Few family skeletons there are which do not sooner or later make their bow to the family doctor. The duties

and obligations of the doctor and his patient to each other are well known in this relation and are almost universally lived up to. This is indeed most satisfying to the heart and soul, but not for long would it quiet the gnawing hunger of an empty stomach. And since the doctor must depend upon the second or pecuniary relationship between himself and his patient for his sustenance, let us for a moment inquire into it.

It is no doubt true that in many instances an expert medical economist, if called to pass upon the justice of the doctor's daily charge accounts, would find them fair and just to both parties, and I do not doubt that this expert would also discover instances wherein the bill rendered and paid actually represented an amount in excess of a fair and just charge for some services; but there is much evidence available to an interested observer which, if analyzed carefully, proves conclusively that on the whole the medical profession is insufficiently remunerated. Let me suggest some evidences of it. A comparison with other professions must be conceded as a fair index. This properly includes with a statement of remuneration, also a comparison of the preparation required for entrance as well.

In 1917 the government income tax reports show 61 per cent. of all engineers in this country (civil, mining, etc.) reported net incomes of \$3,000 or over. Insurance agents whose incomes were \$3,000 or over, 28 per cent.; stock and bond brokers and other brokers, 20 per cent.; lawyers and judges, 19 per cent.; manufacturers, 10 per cent.; architects, 8.5 per cent.; army and navy officers and the medical professors, 7 per cent.; editors and reporters, 6.5 per cent.; commercial travelers, real estate dealers and merchants, 4.5 per cent.; saloon keepers, 1.9 per cent.; clergymen, 1.4 per cent.; actors and musicians, .55 per cent.; teachers, .47 per cent.; and farmers, .24 per cent.

I have the following information from the University of Michigan. This information covers four departments as follows: Medical, Dental, the Law School, and the Department of Engineering.

First: The medical student is required to take two years of preliminary literary training following his high school work, then four years in medical school, and from one to three years post-graduate study as an interne, or as an assistant before he is ready to enter upon the practice of his profession and the earning of a livelihood. In

none of the other professions named are the men required more than their college course, the usual course being four years. You can see therefore that the medical student has to devote almost double the amount of time in the preparation of himself for his work, and then in many cases his income is not equivalent to that of men employed in other professions which have required only about half of the time in preparation.

In the Dental Department the income of graduates was given as ranging from \$3,000 to \$15,000 per year, depending upon the location and the ability of the man. This is important, since the dental student is required to take only four years of study, when he is prepared to enter at once into practice.

In the Law School the information obtained was that a law graduate usually had hard fighting for a year or two, or a few years, often working for a salary in the office of some law firm and usually starting at from \$75 to \$125 per month. After serving his apprenticeship his income was, of course, measured by his ability and success in the practice of law. Large fees have been received by a great many attorneys, a fee of \$1,000,000 in one case having been noted. A good lawyer's income would probably range from \$10,000 to \$50,000 per year.

A surprise lay in the reply to my question regarding engineering. This department, of course, includes all engineers, civil, mining, mechanical, chemical, etc. The reply was about as follows: All graduates from the department usually start in some form of employment at salaries from \$100 per month up, but this is soon increased. The highest salary received by an engineer that they know of is \$40,000 per year. They know of only one that received that amount. Other salaries range from \$4,000 to \$8,000 for ordinary positions, and some engineers who engage in private practice make many thousands above that. This corresponds with my previous quotations from the government tax reports that show the average income of engineers to be above \$3,000 in 61 per cent. of all cases, while the doctor's income reached \$3,000 in 7 per cent.; only seven doctors out of one hundred who make \$3,000 or more per year. I think we may find in this a cue for the unpleasant discovery that the number of medical students is decreasing year by year. Members of a profession, whether they

realize it or not, either attract young men or repel them from entering it by their own showing within it. We do not need to refer to statistics to know that the doctor is poorly paid. Too many evidences about him prove it. Too many doctors make only a bare living, and their attitude shows it. They seem discouraged; they seem dissatisfied; they complain of hard times and poor collections; they do not take vacations, do not keep their office equipment up to date nor their automobiles, nor, in some instances, their personal appearance. In short, the general aspect of the medical profession is such as to cause a young man to stop and soliloquize thus: "Well, now, about medicine. Here is Doctor So-and-So, and there is Doctor So-and-So. They do not look prosperous to me. I don't know whether I want to be a doctor or not. Then one has to wait for a practice after going through the long period of preparation, and here is an engineering course of only four years and salaries are waiting and jobs are waiting, manufacturers are often waiting at the door when the graduate emerges, ready to offer him a position at a living salary to start, so why should I study medicine and take such a long chance?" Is not this sufficient reason for the reduction of the number of medical students? But you may ask: Is it really true that the number of medical students is diminishing? Let me again quote statistics. This, from the educational number of the *Journal of A. M. A.*:

1904.

Number of medical students, all classes.....	48,142
Number of graduates	5,747

1918.

Number of students, all classes	12,727
Number of graduates	2,670

This number of graduates was a decrease of 709 in those of 1917. Of this number between 400 and 500 were women, who are accepted as internes in only 74 hospitals in this country. This cuts the number of internes down to 2,200 or 2,300. There are in the United States a total of 5,741 hospitals, not including sanitariums, insane asylums, or privately owned hospitals. Of these 5,741 hospitals, 3,380 have 100 beds, or over 1,741 have fewer than 100 beds. The hospitals

would require, therefore, 5,741 internes if only one graduate were allotted to each hospital. But since many large hospitals require from 10 to 20 internes, it is a safe estimate to say that there is an interne shortage to-day of 8,000 to 10,000.

According to very recent, accurate information there are to-day in this country without any internes 432 hospitals, having over 200 beds.

I quote from an article appearing recently in the *Journal of the American Medical Association*, by Dr. A. R. Warner, President of the American Hospital Association and Superintendent of the Lakeside Hospital at Cleveland: "The number of hospitals is increasing rapidly. The number of medical graduates is, for the time being, decreasing. The trend is such as to make it improbable if ever again the medical schools will produce enough graduates in medicine to provide internes for all or even a large proportion of the hospitals of the country. The internship as an essential organization of hospitals is gone and a substitute for this system must be produced. It is certain that as the disparagement between the number of hospitals and the number of medical graduates increases, the tendency will be for internes to seek the educational opportunity offered by the larger, better equipped and more active hospitals—and quite properly so. A salary connected with an internship will not make good deficiencies in educational opportunities."

Statistics again show us the number of deaths among doctors of the country in non-war times is about 3,000 a year, many more than the number of annual graduates, so at the present rate of decrease a serious shortage of doctors will ultimately result.

If we are to correct these conditions and insure the future of medicine, we must realize the necessity and importance for organization, for without it we are impotent. Since the dawn of creation men have found strength in union, so we have had tribes, colonies, cities, states, and nations, whose existence is only possible because a great number of people having similar ideas band themselves together for their accomplishment. We must perpetuate our own O., O. and L. Society; it has a brilliant record of achievement. There is much yet to be accomplished, and this brings me to a final recommendation, which after five years of very intimate association with this body, four

years as Secretary, and one year as President, I deem it to be the only step which will prevent its disintegration; and that is, the re-establishment of the society publication as a separate and distinct organ. The intimacy of the membership, their unity of purpose can only be secured and maintained by the receipt and perusal monthly by each member of a circulating medium of exchange of thought, personal news items, and other matters, such as have always been furnished by our JOURNAL. Let me inform you in all seriousness that only fifty-eight members out of a total of more than 200 are now subscribing to the *American Institute Journal*, which, as you know, devotes a small section to the O., O. and L. Society. The remaining 150 are therefore without knowledge of the Society's affairs altogether, except by means of circular letters of its officers. No scientific papers and discussions, no report of the Society's annual transactions reach their tables. How long will it be until their interest is lost and their membership lapsed?

This Society has long been fortunate in the possession of a good, live, monthly JOURNAL, which has no doubt done much to perpetuate and prosper it. A brief history of this JOURNAL may be of interest. I am pleased to make grateful acknowledgment to Dr. A. B. Norton, of New York, a distinguished ophthalmologist, and one of the founders of the JOURNAL, who is also an ex-president of the American Institute of Homœopathy, and an ex-president and active member of this Society, for much of this information. Some time after the formation of the Society in 1878, Dr. George S. Norton established the JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY, which, however, was only a quarterly publication. The history of the JOURNAL as we know it began in 1895, when the *Homœopathic Eye, Ear and Throat Journal* was founded in New York by Drs. A. B. Norton, Chas. H. Helfrich, and John G. Garrison. The JOURNAL was started because these men felt that there was room in the homœopathic school for a monthly publication devoted to our specialty. They felt it could be made of assistance and value both to specialists and general practitioners as well. A quotation from this *Journal's* introduction is as follows: "It is our aim therefore to present each month, short, concise articles on the Eye, Ear, Nose and Throat, of practical importance to the general practitioner, who we believe will welcome it gladly,

as filling a long felt want. At the same time with a list of collaborators, comprising many of the leading specialists of our school, we shall from time to time present articles more distinctly technical in their nature, which we trust will prove both of interest and of value to the specialist."

This *Journal* established a record unheard of before as far as known in the history of medical publications. The first number was mailed the last day of January, the second the fifteenth of February, and the third number on March first. Then for ten years thereafter, as long as the original board of editors controlled the *Journal*, it was mailed promptly on the first of each and every month, and its unequalled history rests in the fact that sufficient subscriptions were received to meet the bill for its first publication, for the first number, thirty days after its publication, and during the first ten years of its publication not one cent was ever paid in by its owners. In 1904 the *Journal* was sold to Dr. A. W. Palmer, of New York, and was edited by him and Dr. John L. Moffat. For six years it was continued as a Homœopathic Eye, Ear, Nose, and Throat Journal, when its editors in 1910 changed its name to the name of the old publication, the JOURNAL OF O., O. AND L., which had been defunct since 1903. In September, 1914, the JOURNAL OF O., O. AND L. was taken over by Drs. Burton Haseltine, of Chicago; J. R. McCleary, of Cincinnati; Dean W. Myers, of Ann Arbor; W. H. Phillips, of Cleveland, and I. O. Denman, of Toledo. This action was taken by reason of the fact that the owners of the JOURNAL at that time, Drs. Moffat and Palmer, both grown old and infirm, desired to relinquish the publication of the JOURNAL; an attempt was made to have the Society take it over at the June meeting of that year. Arrangements could not be completed, however, and it appeared that the JOURNAL was doomed to early death if some action was not taken by individuals. These five men secured the services of Dr. Geo. W. Mackenzie, of Philadelphia, as editor, and Dr. J. R. McCleary acted as business manager. The JOURNAL was enlarged and improved and printed upon better paper, given a new cover, and a considerable amount of money was spent, making it equal to any of the old school journals published at that time. The first year of its operation found a deficit of some three thousand dollars. During the succeeding period of this publication by these men

this deficit was entirely made up and a balance of \$160 remained, which was turned over to the business manager's stenographer who had served three years without pay. However, owing to the war a number of advertisers cancelled their contracts and the owners felt that it was policy to make some disposition of the JOURNAL, whereby its safety could be secure. They therefore turned its affairs over to the *American Institute Journal*, January 1, 1918.

Concerning the present Annual Convention, allow me to conclude optimistically. The conditions of war were felt very keenly by your officers during the past year. So many of our members were in the service that not until the Armistice was signed was it finally decided not to omit the 1919 Convention. The entire period of preparation of the program was therefore limited to a few months only. However, I think I may safely say that while you have in the past had presented to you much more lengthy programs, I doubt if it has heretofore been your pleasure to digest one more wholesome and helpful than that which has been prepared for this occasion. In this connection it gives me great pleasure indeed to pay such merited tribute to those who have rendered willing and invaluable assistance in its collaboration; not the least of whom will be found the New York men, whose Committee, headed by Dr. De Wayne Hallett, will furnish the clinical feature of the year on Thursday. Further acknowledgment is gratefully made to Dr. Albert E. Cross, Worcester, Mass., Chairman of the Section of Ophthalmology; Dr. J. V. F. Clay, Philadelphia, Pa., Chairman of the Section on Otology; Dr. J. A. Ferree, Professor of Eye, Ear, Nose, and Throat Diseases, University of Ohio, Chairman of the Section on Rhinology and Laryngology.

Appointment of the several section chairmen was made possible, as you may know, by an action taken by the Society at its last annual meeting, resulting in a revision of the by-laws to that end. At the same time an annulment was made of an amendment to the by-laws which had been made three years previously, requiring an applicant for membership to present a thesis. Under the reign of this law three new members were added in three years, while with its abolishment this year I am happy to inform you that the Board of Censors will later present for your consideration the names of twenty-three applicants for membership in the Ophthalmological, Otological and Laryngological Society, all of which have been received within the last six months.

PROCEEDINGS OF THE THIRTY-SECOND AN-
NUAL SESSION OF THE AMERICAN O., O. AND
L. SOCIETY, ASBURY PARK, N. J., JUNE 16,
17, 18, 1919, NEW MONTEREY HOTEL.

MONDAY, JUNE 16TH—MORNING SESSION.

MEETING called to order at 12 m. by the President, Dr. Ira O. Denman, Toledo, O., who said: This will be a very informal and very short session. The first on the order of the program is the adoption of the program. It has been the custom heretofore to pursue the program as prepared, and it has usually been the custom to omit reading the paper of any writer who is not present. However, I wish in this program you would make exception to that by motion and make it possible to have Dr. Everett Jones' paper read. Dr. Jones, as you all know, is recently deceased and had prepared his paper before he died. He was sick only a week with pneumonia, and I think it would be a very fitting memorial to have his paper read.

DR. GEORGE A. SUFFA, Boston, Mass.: I would like to make a motion to read the papers of those not present, if the discussers are here, and if time will permit.

This motion was seconded and carried.

THE PRESIDENT: I am very glad you have made that motion, because our program in its entirety is shorter than we usually have it, owing to conditions that will be explained later.

APPOINTMENT OF COMMITTEES.

Committee on Attendance—W. L. Roth, William J. Blackburn.

Committee on Nominations—Composed of ex-Presidents of the Society: George A. Suffa, Dean W. Myers, Burton Haseltine.

Committee on Press—PRESIDENT: I have asked Dr. Bryan and Dr. Sherman, both of Asbury Park, to serve on this Committee. Dr. Sherman is not a member, he is an under-graduate of Hahnemann in Philadelphia, and is in charge of the Psi Epsilon Booth. He is acquainted with the reporters around here. Although he is not a member of this Society, I thought it would be advisable to have them to attend it.

IRA O. DENMAN.

PRESIDENT: Are there any remarks, any questions? The joint session of the Institute, which was to have been held from 12 to 1 today, has been virtually annulled. The paper by Dr. Haseltine will be given to-morrow in connection with Dr. Chevalier Jackson's. Moving picture machines cannot be used in this hotel under the law. We will have these two papers at the Ocean Movies.

Adjourned 12:05 p. m.

MONDAY, JUNE 16—AFTERNOON SESSION.

The President, Dr. Ira O. Denman, called the meeting to order at 2:40 p. m.

The Secretary, Dr. Neil Bentley, Detroit, Michigan, read a telegram from Dr. A. B. Norton, New York.

PRESIDENT: Owing to the distinction of Dr. Norton and his long connection with this Association, I would like to entertain a motion that we send a telegram to him regretting his absence.

This motion was made, seconded and carried, and the Secretary requested to send said telegram.

PRESIDENT: In the absence of the First Vice-President, Dr. George J. Alexander, Philadelphia, Pa., and the Second Vice-President, Dr. Alva D. Sowers, Chicago, Ill., I will ask the Secretary, Dr. Bentley, to be President while I present my address.

The President then delivered his address.

SECRETARY: A motion to refer this address to the President's Address Committee is in order.

A motion was made, seconded and carried, referring the President's address to the President's Address Committee.

Committee on President's Address—Albert E. Cross, Burton Haseltine, Douglas Macfarlan.

DR. BURTON HASELTINE, Chicago, Ill.: This is an unusual address, extremely unusual. It is an extremely valuable address, given at a rather critical time, and as one of the members of the Committee I do not want to bring in recommendations until I know the feeling of the membership.

SECRETARY: What is the pleasure of the Society? If you wish to make a motion to discuss the President's address at this time I will entertain it.

DR. BURTON HASELTINE: If anything is going to be done in regard to the JOURNAL matter, one of the important recommendations is that we re-establish a publication. Now this is not a thing we can intelligently decide in a few seconds. If we bring in a resolution either to do or not to do and you act upon it, it is a constructive action. We cannot take any steps for the establishment of a publication without several serious points being decided. It should not be decided without free expression upon the part of the membership. There are some matters of information which should be in the hands of the members before the final decision. I therefore move that we take up informally at this time all points in the President's address.

This motion was seconded.

DR. GEORGE W. McDOWELL, New York: I think we should put a time limit on the discussion so that the papers will not be crowded out.

SECRETARY: Suppose we set not over thirty minutes for discussion on the President's address. What limit to each speaker?

DR. GEORGE W. McDOWELL: Not over five minutes.

The motion was then carried.

DR. ALBERT E. CROSS, Worcester, Mass: I have been appointed Chairman of this Committee and have had very little time to give consideration to the matter presented by the President. I think it is extremely important. I happened to be one of the fifty-eight who subscribed to the *Institute Journal*. It seems to me that it is a very serious matter when only fifty-eight out of 200 can come in contact with one another except through personal communications from the President. For that reason, if for no other, we ought to have some communication with our members. At first thought I would say by transactions, if nothing more. Some feel it would be a mistake to go back to the old method of transactions. For the purpose of feeling out this meeting we would like an expression of opinion as to having a publication quarterly or monthly, the Committee would be helped by the observations of those present. I think it is more for the Committee to absorb and develop the ideas of the members here than for us to present our own at the Wednesday Session.

DR. BURTON HASELTINE: Has the President any plan for putting into effect his proposal for a journal? That is, has he any individual or individuals whom he believes would be willing to officiate?

PRESIDENT: I am sorry Dr. Mackenzie is not present. I have had some correspondence with him, but he has not committed himself, but has not refused to establish a journal, providing this Society would stand behind it. The details have not been worked out. I think he will be here and this Committee can confer with him; and I believe if he were given assurance of official support equivalent to the subscription price, one for each member, take it for granted that each member would become a subscriber to the JOURNAL, and in addition to that all we are able to pay for the annual transactions, I think that he would be willing to undertake the publication on his own account. I may be saying too much in his absence. That is the only clue I have to work upon, the only thing that I have to offer.

DR. BURTON HASELTINE: I think we can hardly make them pay by subscribing for transactions. Is that what you meant, Dr. Denman?

PRESIDENT: No. I meant out of the dues.

DR. HASELTINE: You can include your subscription to the JOURNAL in the membership dues, including transactions of the Society, but you can't ask for another appropriation on top of that to assist your JOURNAL. I so understand you to require. This information we should have. If you are thinking of any such publication as we had for three years you are mistaken. That JOURNAL differed from any other JOURNAL publication ever issued in this respect, it cost five or six times what it could earn. You must not think of that, but of a far inferior journal mechanically to that. That was operated by an individual group of men, who spent several thousand dollars making up the deficit. Now if you have another group of men who are willing to spend \$2,000 or \$3,000 a year, you can do it.

SECRETARY: Is there any further discussion?

THE PRESIDENT: I see among us one of the old veterans, and while I have not enjoyed a close personal acquaintance with this member, I have become quite well acquainted with him in the last few months of the Transactions,—which I did with a great deal of profit and pleasure; I refer to Dr. William R. King, Washington, D. C.

DR. WILLIAM R. KING, Washington, D. C.: I do not know that I have very much to say. I have been rather inactive the last few years, not purposely, but for various reasons. I was interested in the old Society, originated by Dr. George S. Norton, which became in-

ocuous largely because of a suggestion from the American Institute that it was interfering, they thought, with the Institute. We continued as a Bureau of the Institute for a number of years, and it was at Newport when Dr. Hoffman, of New York, was President and I was Secretary,—we were discouraged; papers were hard to get; complaint was made by the average member of the Institute that they were too technical for them, while if they were lacking in this quality they were not acceptable to the specialists. We got busy that year; Dr. Houghton and Dr. Bissell laid the plans for the founding of this Society, which took place the following year at Detroit. Dr. Norton was president at that meeting. The active men in eye, ear and throat specialty organized the American Homœopathic O., O. and L. Society, and Dr. Norton became the first president.

The established journal at that time became the official journal of this Society. The Society donated a certain amount from its treasury receipts each year towards the support of the JOURNAL. It was not much, but it helped along, and was continued, as our President recounted in his address, ten years. Things went along swimmingly—and I am thoroughly in favor of the journal proposition if we intend to live as a Society.

Being naturally interested in the re-organization of the Society, Dr. Park Lewis claimed there were enough members present to organize. The Society prospered, as you all know. One of the principal things that made it possible was the fact that the membership was reached each month by the official journal; and that it should be reached at this time, as it was then, by a monthly or quarterly, is a question that is worth considering. I am free to confess that I believe the President is absolutely right that it will be almost impossible to continue this Society as an active organization unless we can keep in touch with our members. I did not know that the percentage of subscribers to the Institute Journal was so small. Unquestionably a large percentage of our membership is not in touch with what we are doing by reason of their absence from the meetings.

The question narrows down to two points: one of finance, and the other, the proper parties to carry on the proposition. From the editorial standpoint we have that talent unquestionably in our midst in considerable quantity; but the business management I am not so

sure of unless we secure Dr. Garrison, and I presume he would not be willing to start in on such a task. I do not recall one who would be willing—who may have the ability and energy, and the time, which is perhaps the principal thing after all, to give to the business management so that the journal can be kept somewhere within the range of self-payment, or nearly so. I think there is no question but that a deficit would be taken care of by personal contribution. I believe that private members published the last journal, the last few volumes; as Dr. Haseltine said the financial part would be impossible unless a number would be willing to go down into their pockets for more than some of us could afford.

I am fully in sympathy with the plan of figuring out some way whereby we can accomplish the re-establishment of the official journal of this Society. I think that the future depends largely upon it, and unless we can find some way out we are going to struggle along and have the same trouble that many other organizations are having. This is along the lines of the President's thought regarding the matter of falling off in the general ranks, and thereby the ranks of the specialists, which is a menace to a society that has been so successful and one which I have been so closely associated with. I will do all in my power to make the venture a success. Thank you.

DR. WILLIAM M. MUNCY, Providence, R. I.: As treasurer I understand that it will not be a bound transaction; if we are not paying for a bound transaction, but printing a journal instead, the Society can get along nicely with \$2.00 dues; if not for transactions, if we raise dues to \$5.00 the Society's expenses would be met with our small membership. With our small membership at \$3.00 it would amount to about \$600, which is a drop in the bucket. We have paid as high as \$300 to help out the journal in one year.

DR. GEORGE A. SUFFA, Boston, Mass.: Have you taken into account the increased cost of printing, etc.?

DR. WILLIAM M. MUNCY: I did not say anything about the printing of the journal. I said if we raised dues to \$5.00 we would have only enough to give \$600 to the journal, which would be only a drop in the bucket.

DR. J. HENRY HALLOCK, Saranac Lake, N. Y.: We ought to have a journal, but I do not know how to get the money.

PROCEEDINGS OF THE THIRTY-SECOND ANNUAL SESSION.

DR. DE WAYNE HALLETT, New York: I have nothing to say on this subject. I have had nothing to do with the publication of the transactions, except at the time when I preceded Dr. Muncy as treasurer. I have no doubt that it would cost more money than it did then, and at the same time I have no doubt that we need a journal for the proper maintenance of the Society spirit upon which our continuation as an active Society largely will depend. It has occurred to me that an item that would represent some economy and perhaps not much lack of value or satisfaction would be a publication once in two months instead of once a month. It would represent a great deal less labor; possibly would be as nearly satisfactory.

DR. JOHN B. GARRISON, New York: I do not know that I can say very much. As far as I have been associated with the publication of the journal it was always a losing venture. No journal can succeed unless it has paying advertisements. It is much more difficult to get them now than ten years ago. At first we had fair opportunities for getting advertisements and did so, but each year found the advertisers less and less willing to pay their money for advertising in a special journal. I do not see how any journal can be established for a small society like this and pay its way. The only reason that the O., O. AND L. JOURNAL did not continue to exist much longer with the men who had charge of it was because it did not pay even then.

DR. GEORGE W. McDOWELL, New York: Possibly we could have a quarterly reprint of the papers as they appeared in *The American Institute Journal*, increasing the membership dues to cover the cost. That would keep the membership in touch with the Society at stated intervals, and in addition to the regular published articles would be our regular business transacted at the meeting and any suggestions from the Executive Committee that they wished to reach the general body. I would like to present that as a suggestion to the Committee.

PRESIDENT: I think that is very good.

DR. BURTON HASELTINE: In making that motion for an informal discussion it was not my intention to have it taken down by the stenographer. It should not appear as part of our discussion. This discussion should not be printed in our regular transactions. The expense itself would be unwise. I would like to hear from Dr. Macfarlan. I do not see any other Philadelphia man here.

DR. DOUGLAS MACFARLAN, Philadelphia, Pa.: I certainly am in favor of the suggestions that have been made as to printing a journal. I think it is the only way of keeping us together. It would give us a little pride in our outfit and stimulate us not only to get our papers for our own meetings, but in getting acquainted with each other in the type of work we are doing. I think it is not an impossible task. The last suggestion made appeals to me very strongly,—the suggestion that these papers might be published in the *Institute Journal* and reprinted in a collected form quarterly, because there will not be enough to print monthly along with any business the Society may want to transact, any information that it may want to get out to its members in one way or another for our own sakes and the sake of the Society. After that fashion the expense could be cut down very greatly, I think. I feel sure from my acquaintance with Dr. Mackenzie that he is very enthusiastic about the journal. He is very enthusiastic for everything in the way of a publication. There could not be anyone better to handle it. I think it can be done. I would not be discouraged about the present problems we have.

THE PRESIDENT: I want to add one bit of information as a further argument for the accomplishment of this thing in some form. That is, *The American Institute Journal* is quite voluminous. As you know, there are so many Sections that have to be given conspicuous places—and they complain because of the amount of space that we have asked of them. In a recent communication to Dr. Mackenzie, which they sent me, they propose not to publish our discussions in the future on account of the limited space. They propose to publish our papers only. So that unless we take some action you see that we may fare still worse in the future than we have in the last year. You can readily see that would mean if we are not to have our discussions published we would have no need for a stenographer. The papers only would be published. Whatever is said here—which we all agree often brings out the meat of the subject, the collaboration and discussion—would all be lost if this action is not taken. That should be taken seriously into consideration in our deliberations over this.

DR. J. R. MCCLEARY, Cincinnati, O.: This is an interesting subject, and while I am heartily in favor of seeing the old journal re-established, or a new one, I would have you bear in mind the financial

obligations you are up against. As our Treasurer said six hundred dollars would be only a drop in the bucket. Unless you have a group of men who will stand by you for three or four thousand a year I do not see how it would be possible. If the *Institute Journal* disagrees and does not publish our discussions you pay the same price as for original manuscript. You pay for type set up plus the grade of paper used. It is not a mere boy job. Your advertisements must be secured by a certain kind of man, who will absolutely put the screws to the men they deal with. Unless a proposition like that is put through you are not going to get advertisements. I offered prices to people who secure advertisements and they would not touch it at any price. They will take the advertisements and place them, but won't get advertisements for you. You have got to see your way through for a year. If you can see your way through for a year it will be an easy matter after that. We went in debt \$3,000 the first year. Our membership doesn't even back the publication of the *Institute Journal*. It is a question whether they would come across and back this 50 per cent. I am sorry to say that all the men here were not subscribers to the old O., O. AND L. JOURNAL. I think it would be the life of this Society to have a journal of our own.

SECRETARY: The time is now up and I will turn the Chair over to Dr. Denman.

The President then resumed the Chair.

PRESIDENT: I wish you would refer to your programs and note paper No. 10 in the third session, Tuesday forenoon, "Lantern Demonstration of Bronchoscopy and Esophagoscopy With Report of Cases," by Dr. Chevalier Jackson. A telegram received from Dr. Jackson asks us to place him on our program at two o'clock Wednesday. So we will act accordingly. Two o'clock Wednesday we will convene in the motion picture theatre, the Ocean House, on Fourth Avenue, and at the same time Dr. Haseltine will give the paper and demonstration of motion pictures and still pictures that he was to have given this morning. Following that we will return here for a business session and the completion of the program as already outlined.

The first paper on the program this afternoon is entitled "Further Experience With the Smith Indian Intracapsular Operation for Cataract," by Dr. De Wayne Hallett.

Dr. De Wayne Hallett, New York, then read his paper.

Discussion by Dean W. Myers, Jos. E. Sternberg, Ralph I. Lloyd, William McLean, Wm. M. Muncy, Jos. F. Roe, Wm. J. Blackburn, and the President.

DR. W. J. BLACKBURN, Dayton, O., read a paper entitled "Local Anesthesia in Nose and Throat Work."

This was discussed by A. B. Clapp, Chas. H. Hubbard, Henry W. Champlin and D. M. Miller.

DR. WILLARD THOMPSON, Dixon, Ill., read a paper entitled "Some Experiences With the Tonsil at a Naval Base Hospital."

THE PRESIDENT: Gentlemen, I wish to inform you that this excellent paper that you have just heard is by one of our embryo of the O., O. and L. This doctor is one of the coming members, and under the old regime this paper might be counted as his thesis.

THE SECRETARY: I wish to apologize for the printed program at this stage. The name of Dr. Rowland got on here by mistake. The man who is to lead this discussion is Dr. Charles H. Hubbard. The fault is not my stenographer's, but my own, and how it happened I do not know.

Discussion by Charles H. Hubbard, Geo. C. Webster, and Burton Haseltine.

DR. GEORGE A. SUFFA, Boston, Mass., gave a "Clinical Demonstration of Muscle and Fusion Testing."

DR. DOUGLAS MACFARLAN, Philadelphia, Pa., read a paper entitled "New Suggestions in the Treatment of Atrophic Rhinitis and Pyorrhea Alveolaris."

Adjourned 6:45 p. m.

(To be Concluded in February Number.)

FIVE RECENT CASES.*

HOWARD P. BELLOW, M. D.,

Boston, Mass.

IN response to an eleventh-hour appeal from our President I am about to present a short paper which was not premeditated on my part. So little time was there for its preparation that I was rather non-plussed until it occurred to me that a report of four or five cases, suitably condensed, which should show the action of one single homœopathic remedy might not come amiss or be wholly without value. Clinical evidence is always rather presumptive than conclusive, and for this reason clinical reports have a value from their quantity as well as from their quality. It is certain that where there is *much* smoke there is surely *some* fire. With this somewhat apologetic preface I will proceed to present the evidence.

CASE I. March 13, 1919. The patient, a man about thirty-two years of age, came to me on March 6th with acute catarrhal inflammation of the right middle ear. Otherwise he was in good health. Under the usual treatment the inflammation has been subsiding and the hearing is beginning to return. For the past three days has had severe and pretty constant neuralgic pain, not around the ear alone but generally over the right side of the head and face. Nothing in particular was done for this, the treatment being continued as before for the distinctly aural condition.

March 15th. Ear improving. No neuralgia in or about the ear, but it continues over the right side of the face and head. Same treatment continued.

March 17th. Ear clearing very satisfactorily and hearing improving but neuralgia still very troublesome, now especially over the right eye. Stop other medicine and take *Magnesia phosphorica* 6x every three hours until neuralgic pain is relieved, then resume the remedy for the aural condition.

*Read at the Meeting of the Am. Hom. O., O. and L. Soc., Asbury Park, N. J., June, 1919.

March 22nd. Neuralgic pain entirely relieved in one day, when the Mag. phos. was discontinued as directed.

April 5th. No return whatever of the neuralgia. Ear in very satisfactory condition. Treatment stopped.

May 10th. Patient reported normal ears and no return of the neuralgia at any time.

CASE 2. Feb. 19, 1919. The patient, a young lady about twenty-five years of age, is referred to me from a distance with a chronic aural condition upon the right side, of a catarrhal nature, the three most annoying features being deafness, tinnitus and pain. The latter is sometimes of steady, dull character in the ear itself, but the greater distress is from sharp shooting pains down both jaws and over the side of the face—relieved by hot applications. The teeth have been x-rayed and three removed from the right side because of abscess formation, but little or no relief was afforded. After very careful examination I became convinced that this pain was not due to inflammatory conditions, but was neuralgic, and, as that seemed the chief cause of complaint at present, I began my treatment of this case with Mag. phos. 6x, one-grain tablet four times a day.

March 21st. Conditions in this case have been subject to abrupt changes, in consequence of acute colds, etc., and two or three remedies, at different times, have been prescribed, but when the pain has been predominant the patient has returned to the Mag. phos. as required to afford relief. Marked improvement as regards the pain is now evident, and medication is directed pretty constantly to the condition of the middle ear.

May 9th. With the exception of two exacerbations from chilling, followed by acute colds, there has been no complaint of the old neuralgic pain, in spite of much cold, damp and changeable weather. No cure is claimed, but marked relief has been afforded and the handling of the case apparently much facilitated by the action of the Mag-phos.

CASE 3. March 24, 1919. The patient, a lady about fifty years of age, has a chronic catarrhal affection of the right ear with the usual deafness and tinnitus. Among the more acute symptoms enumerated, sensitiveness of the ear to cold air and very annoying and persistent neuralgic pain through the frontal sinus, eyes and forehead

FIVE RECENT CASES.

held so prominent a place that I made her first prescription Mag. phos. 6x, one tablet four times a day.

March 31st. Neuralgia much relieved in spite of very cold, wet weather all the week. Remedy discontinued in favor of one for the chronic aural condition.

April 7th. No return of the neuralgia.

CASE 4. Feb. 10, 1919. The patient, a lady about sixty-five years of age, has been suffering from severe pain in the left ear for the past three days, mostly of sharp, shooting character, but to-day somewhat steadier and "grinding." Temporary relief is afforded by applications of dry heat and local pressure. Temperature shows only slight rise, and examination shows the ear wholly free from congestion. Arsen. has been taken without effect. This case was relieved promptly and most satisfactorily by Mag. phos., and the patient sent a grateful report by letter.

CASE 5. Dec. 12, 1918. A girl of fourteen, with chronic catarrhal condition of the left middle ear. Much pain in the ear for the past year or more, worse from cold air and of sharp, shooting character. Tympanic membrane thickened and depressed but showing no inflammation whatever. On account of annoying neuralgic pain I began the treatment of this case with Mag. phos. 6x, one grain tablet four times a day.

Jan. 30, 1919. Pain stopped while taking the medicine first supplied. Changed prescription to remedy for catarrhal middle ear.

March 6, 1919. No return of pain has been noted by the patient, nearly three months having now elapsed.

Let no one think that as soon as the diagnosis of neuralgia is made in aural cases it remains simply to administer Magnesia phosphorica and a cure will follow. Such is by no means true. Some neuralgic cases will not be helped by this remedy in the slightest degree—but they will respond to some other remedy homœopathically chosen. The cases above, which have been selected and cited by me, were simply appropriate cases for this particular remedy. Among the indications for its choice we expect to find prominently amelioration from dry heat and from firmly maintained local pressure over the painful area, although the first light pressure may cause aggravation. I have always used the sixth decimal trituration.

In estimating what value this clinical report may possess it is important for me to add, in closing, that in no instance was any adjuvant of treatment employed except the local action of dry heat by means of the hot salt bag—which, everybody knows, affords temporary but not permanent relief.

DISCUSSION.

DR. H. S. WEAVER, Philadelphia, Pa.: I have been interested in the magnesia salts in these ear conditions for some time. There is just one little point I want to make and that is this, that many of these cases do not present the characteristic symptoms of Mag. phos., which is a sharp neuralgic pain; but you will have a number of cases come in with a dull, aching pain, neuralgic in type, but not the acute sharp neuralgic pain. For these cases I have found Magnesia mur. beneficial. It has that great characteristic, pain aggravated at night, drives them almost frantic. They get up and walk around. They can't get rid of the pain in the ear and face.

DR. JAMES A. CAMPBELL, St. Louis, Mo.: The prime and only reason for the existence of this Association is because we believe in, and advocate the efficiency and therapeutic value of the properly selected homœopathic internal remedy, in addition to the local, mechanical and sanitary methods, which experience and observation have proved of value, and which are the same and are in use by eye, ear, nose and throat specialists everywhere.

The five typical cases presented by the essayist, in such a clear and direct manner, demonstrates and proves the above statement, and shows why we claim our methods are better and our successes more marked than obtained by our friends of other schools, where only local or mechanical treatments are employed.

There is nothing whatever new in the use of Mag. phos., when the symptoms call for it, as they clearly did in these cases. The commendable point about the essay is that it calls attention to and emphasizes the fact that the homœopathic principle is an unvarying and positive truth to-day as always, no matter what or where the disease is, and reminds us in a forcible way, that in our wild strivings to follow "new things" and empirical scientific suggestions, so numerous to-day, there still remains a time and place for the properly selected homœopathic remedy; and I take it that this is the object of the essayist.

FIVE RECENT CASES.

And coming from a man of his long and large experience and well known integrity, will be accepted as gospel truth by all of us—and so before we tap the spine, revel in blood count, or brag of our numerous operations, or fill our patient with salvarsan as an experiment, each of which may have a place as last resorts, let us remember the possibilities of the internal homœopathic remedy, as Dr. Bellows reminds us in his paper "*Lest We Forget.*"

PRESIDENT: It seems to me that one essential feature of purely homœopathic organization is being neglected by this Society year after year, that is to emphasize the influence of the homœopathic therapeutics in our Association. There is a dearth of papers on therapeutics. In going over the transactions of our Association for fifteen or sixteen years there were several papers on materia medica each year. Now this is the only one we have. It runs two or three papers a year. So I was interested to know how much interest this purely materia medica paper would elicit. If we wish to remain distinctive and show a reason for our existence we should become very enthusiastic over a paper of this kind.

DR. WM. M. MUNCY, Providence, R. I.: The discussors of this paper have all emphasized the larger application of homœopathic drugs and the homœopathic prescribing of the same; and it is with considerable temerity on my part that I attempt to add to what has preceded, due to the fact that my time is so taken up with the scientific side of our specialty that I find my general knowledge of homœopathic materia medica losing ground. The reason for this is that it is upon the totality of symptoms rather than upon local manifestations alone that our drugs should be prescribed. Yet, upon the other hand, we as specialists could be of considerable aid to the general prescriber if we would note any peculiar pathological findings of each case in which a homœopathic drug is prescribed, and, noting the results, might be able to add to our materia medica by having the pathological picture which coincides with the totality of symptoms made known. My experience may have been greatly different from others, but I have found it frequently proved that if no general symptoms point to a different drug, if there is a congestion of a slight amount around Shrapnel's membrane and perhaps a vessel or two conspicuous along the handle of the malleus, Mag. phos. is the remedy, especially if the Eustachian

tube is patulous; while if it is closed or not freely open, showing more post-nasal congestion, Merc. dulc. seems to be the remedy; but with neither of the above conditions, but a hyperplasia of the post-nasal tissues, with little discharge, Kal. mur. seems indicated.

I am not pleading for prescribing on visual fields obtained on examination, but putting emphasis on comparing these with other symptoms, and with the various other drugs prescribed as an aid in choosing the remedy.

DR. ROBERT G. REED, Cincinnati, O.: I did not intend to say anything and I am rated rather as a "back number" and sometimes feel like it. I feel like a patriarch, but I am interested in the materia medica of the eye, ear, nose and throat. I have taken a good deal of interest and the thanks I have gotten for it is that I am said to be unprogressive because I don't operate enough. I can say this. I had charge of the eye, ear, nose and throat department of the Cincinnati Orphan Asylum for fifteen years and in that time I never had occasion to do a mastoid operation on any of these children. Not that there were no mastoid cases—the mastoid was swollen up, osteitis, running ears. Maybe I did wrong. On the outside I was called to see a very prominent manufacturer one day, and on consultation with Dr. P., I said: "Doctor, I know I will be criticized for not sending him to a hospital." "Well," he said, "he is scared to death now, don't scare him any worse." I said, "We will try him for twenty-four hours. There is indication for operation. We will try the homœopathic remedy." The patient never went to the hospital. He has never gone to the hospital. His hearing is good. Maybe it didn't cure him. I don't know. I have seen these children where they had been having in the spring of the year suppuration of the middle ear, the ear standing out at right angles to the head and where they had every opportunity. Just as one was getting over the supervisor allowed the child to go out and roll down hill on the cold ground. There was a recurrence of trouble. Had to go through it again.

Then, again, a little child had scarlet fever followed by suppuration, cold, tenderness over the mastoid. I did not know whether I would have to operate, but the mother had some idea of homœopathy and she demanded that that child be cured. That was four years ago; the child is well and hearty and has good hearing, etc., and, as I say,

FIVE RECENT CASES.

in consequence of this people say, "He is unprogressive." Why even the hospital doesn't think very much of me because I don't bring enough cases there. I am on the staff, one of the older members, but I am willing to abide by the thanks of my patients and not the judgment of the medical profession. That would fill the hospitals full. I don't know. Dr. Hunt here says I am a good prescriber, but I don't know enough about the homœopathic materia medica. I wish I knew more, but what little I do know I got along with, and am simply here to bear testimony because I was asked.

Since Dr. Hunt has requested, I'll mention a few remedies especially adapted to conditions of the ear.

BELLADONNA, with which you are all familiar, with its passive congestion, pain and throbbing in ear and especially along the dental nerves.

CAPSICUM: During an acute suppuration where the disease does not seem to respond to other remedies but inclines to extend to mastoid or brain.

MERC. SOL. Where there is subacute pain in the ear, the side of head with pulsating ear, the pulsation may be seen on inspection of drumhead.

MERC. DULC. After suppuration has ceased and the perforation healed, still there is dullness of hearing with thickening of membrana tympani and redness of fauces with partial closure of Eustachian tube

BARYTA MUR. In chronic catarrhal deafness without pain, but the head noises and deafness are always worse in damp weather.

KAL. MUR. Very much like Merc. dulc., only there is not the thickening of the membrana and not much redness of the fauces.

MAG. MUR. Neuralgia of face. Ears seem tender and sensitive to noise, yet the hearing is not good. When the neuralgia is severe the patient wants a bandage tied around the head or makes pressure on the head with her hands. I believe this remedy is of very little use in ear troubles that originate in the ear, but it is very useful when they occur secondarily to general conditions, such as chronic indigestion with constipation of a type peculiar to this remedy.

TONSILLECTOMY WITH THE LA FORCE INSTRUMENT.*

GEORGE C. WEBSTER, JR., M. D.,

Chester, Pa.

ONE morning during the latter part of May, shortly after I had returned home following my service of fourteen months in a hospital at one of the embarkation points, I was called to the 'phone by one of the members now present and commanded to write something for this meeting. I protested that I had nothing; whereupon I was informed I would in that event be given a subject, which was worse still; so I decided simply to relate my experience in reference to what became a major portion of our surgical service.

Enucleation of the tonsil is a time-worn subject, and written about by enthusiasts of many different styles of technic all striving to encourage us with the ideal operation, so that in case my choice of subject bores you a little I will make it as brief as possible.

Newport News, Virginia, was one of the principal embarking points for our troops leaving for Europe, and the embarkation hospital was responsible for the care of the sick who entered that port, which kept about 3,000 beds occupied. One entire ward of more than 100 beds was provided for the eye, ear, nose and throat service, and material was abundant.

Tonsillitis was very common among the soldiers, perhaps due to their new life of exposure, and many men would be incapacitated from this cause for several days at a time.

Avoiding any reference to the indications for the removal of the tonsils, other than to say that in the army any procedure that will make a man a more efficient soldier is an indication for the same, the wisdom in the removal of a soldier's tonsils was left to the surgeon absolutely, upon the score of increasing the number of days that the soldier could be counted upon as an available unit.

*Read at the Meeting of the Am. Hom. O., O. and L. Soc., Asbury Park, N. J., June, 1919.

Throughout the various camps several thousand tonsil cases were operated, and up until March, which was the last report I saw, there had not been a fatality,—not however without near approaches. I do not know if the service finished without a death from this operation, but the evidence somewhat changes our attitude in regard to the element of danger which heretofore concerned us with adults.

The ideal tonsil operation conceives of as little discomfort to the patient as possible either under general or local anesthesia; a simplicity of instruments and of performance; absence of trauma to pillars or surrounding structures; speed of performance; a clean and thorough enucleation, and, for the safety of the patient and peace of mind of the operator, a maximum assurance against post-operative hemorrhage.

My observations lead me to conclude that there are two types of operation valuable to the surgeon doing tonsil work.

The first type, that of dissection and snare, necessitates a multiplicity of instruments and is provocative of more or less hemorrhage at the time of operation, with slight assurance that it will not occur later; however, this type of surgery is applicable to all tonsils, though requiring no mean skill not to injure nearby structures.

The other type, given to us by Sluder, conceives of a single instrument with no preliminary dissection. This method is applicable to a very large percentage of cases, is rapid and efficient, but gives no more assurance of freedom from hemorrhage than the slow snare.

Many modifications of the Sluder instrument have been made and not a few complications added, all looking to control of hemorrhage. However, it is questionable if any are more satisfactory than the original instrument.

The La Force instrument differs in construction from any of these, and applies only the Sluder principle. The fenestra of the La Force is square or oblong, and is supplied with both a sharp and a blunt blade. Its construction and application are simple in the extreme. It is applicable in all cases where the Sluder is; it minimizes trauma to the pillars and will accomplish with unerring regularity, when properly applied, a bloodless tonsillectomy with a minimum possibility of post-operative hemorrhage.

I first saw this instrument used in the clinics of Drs. Ross Skillern and Robert Ridpath, of Philadelphia, and learned from them its use.

These men I believe consider it possible of application in one hundred per cent. of children and perhaps sixty to seventy per cent. of adults. They preferred to confine its use, nevertheless, to cases of general anesthesia, believing the bulk of the instrument to be a factor in the alarm of the patient under a local anesthetic.

This theory and its hemostatic qualities I had excellent opportunity to observe in the service. All our cases were robust adults, under local anesthesia, and the La Force method was the only one never followed by any post-operative hemorrhage, and which gave the most uniformly good results.

The number of these adults in which I found it serviceable was not less than fifty per cent., and the average time of removing both tonsils was three minutes.

Any fear the patient had at the sight of the instrument was offset by the speed possible in its use, thus avoiding much of the gagging and unpleasantness of several instruments in the mouth for a longer time; and in the check cases used for comparison, in which one tonsil was removed by the La Force and the other by dissection, the patient always unhesitatingly answered in favor of the former as less painful and less disagreeable in every respect than the dissection. So much was this in evidence that patients in the ward awaiting operation would be posted by those returned to ask for the operation with that large instrument.

In closing I would suggest to those of you who have been looking for but have not yet found that single instrument which combines those qualities you have been seeking, to investigate the La Force and satisfy yourself of its bloodless performance, and experience the sense of comfort and security one has after leaving the patient.

I believe this instrument accomplishes all that any instrument of the Sluder principle does, that the enucleation is cleaner than the average dissection, and the protection against hemorrhage superior to that of any other technic yet devised; and all this accomplished with as little trauma and less distress to the patient than any other method I have yet seen.

DISCUSSION.

DR. DEAN W. MYERS, Ann Arbor, Mich.: I have had very little

experience with this particular operation, my experience being limited to perhaps a dozen cases, but I have made one or two observations which I think are worthy of consideration. One of them is that there are so many of these instruments made at this time that there are many imperfect ones being put upon the market. I have had two myself. In the first one the instrument was so soft it would bend out of shape and I would have to bend it back with my fingers between operations. In the other instrument the dull plunger blade was not fitted accurately into the fenestrum and it would let go of the stump after the tonsil had been cut off. However, I am convinced that, with an instrument properly made and the technic properly carried out, it is, in a large number of cases, the ideal operation.

I have said to my students, however, "you cannot have one of these instruments in the clinic. You must first learn a dissection operation which you must do well. After you have mastered that you may take my instrument and learn the La Force operation." I believe it would be a great handicap to any young man to learn the La Force operation to the exclusion of a dissection method, because the operation probably is not applicable to a large percentage of adult cases. It may be that it is applicable to nearly all children who have not had peritonsillar abscess or something of that sort. The cases I have had have been quite varied. One woman, thirty-five years of age, under general anesthetic, with very, very small submerged tonsils. I was quite surprised to find I had gotten this little tonsil into the instrument. I tried again with a patient of that age and failed entirely with the tonsil on the right but got the one on the left. The healing on the two sides was quite different; the second procedure securing the tonsil with the first application of the La Force instrument healed more quickly. When the operation is carefully performed, and is successful, I have never seen so beautiful, so clean, so easy an enucleation of the tonsil as this instrument does. The hemorrhage is greatly reduced, most of the cases having no hemorrhage at all, unless for some reason the blunt plunger fails to hold. Make yourself familiar with the instrument's mechanism and know exactly what it is going to do. Work it over on paper until you are absolutely familiar with the manipulations. It is the simplest thing in the world after you have learned the technic, but if you undertake to do the

operation without being familiar with its little tricks, you may have trouble. The last instrument made is much simpler and lighter in weight, the screws smaller, taking off a lot of weight. I recommend the operation in selected cases. I believe it is going to make the after healing shorter, the loss of blood less, the traumatism in the throat less and the removal and destruction of surrounding parts much less.

DR. W. H. WILLIAMS, Middletown, O.: I want to congratulate Dr. Webster on his results. I have not done this operation at all. The reason for it is about like this: Several years ago at the time the Sluder operation came out, I was looking around the clinics at Cincinnati. I asked about it there. They said we could do it quicker on the Sluder. They admitted they frequently left pieces of tonsil in the throat. I wanted something more accurate. I did not do any clinic work, I gave it up. I do not understand how that straight blade can cut through a curved surface. I know Sluder brings the tonsil part over the maxillary, but I do not see how he does it. Perhaps my perception is dull.

DR. C. LESLIE RUMSEY, Baltimore, Md.: I believe after the instrument is thoroughly clean if you will put a few drops of oil in the space where the hemostat fits, where the blade fits, you will have a better working instrument. I learned that after an experience. I found the screws did not act very well on my third and fourth operation. I then attended to it myself, even though cleaned at the hospital, by using a drop of oil around these points.

DR. NEIL BENTLEY, Detroit, Mich.: I very much appreciate Dr. Webster's paper and have been using the method for two years. I can verify everything he has said. It does, when it works perfectly, give ideal tonsillectomy. When two different types of operation are used on the same patient, I have invariably found when you ask the man which side of the throat feels the better he will invariably tell you that the side on which you used the La Force is all right, but the other is the sore one. I did not find the tremendous change in the amount of sore throat following operation that it might lead us to believe. That varies with patients. Even in La Force work perfectly done the throat will sometimes stay sore several days. Nevertheless, the amount of soreness is distinctly less with the La Force instrument. Dr. Myers mentioned to me a little modification in technic. I fol-

lowed the method of Jones, *i. e.*, to slip the instrument around the base of the tonsil first and then swing across. Myers said he inserted the flat side along the posterior pillar, fastening that spot. Then push the tonsil through with your forefinger, pushing from in front of the anterior pillar.

DR. DEAN W. MYERS: The important thing is to keep your hand down. If you are operating on your patient's right tonsil, put instrument against pharyngeal wall until fenestrum comes over posterior pillar, lifting tonsil out of its bed. Keep the hand down, pulling left cheek back with the instrument over in the flat position, forcing the tonsil over the instrument into and down through with the finger of the left hand. The instrument extends *across* the mouth. Change hands and repeat for left tonsil.

DR. NEIL BENTLEY: I found one objection to the new model. It is hard to turn the cutting edge blade. I have found in some cases it is almost impossible to force the cutting blade through the tissues. The blade probably was too dull. In the model I am using the blade is dull, but you have large lugs on the wheel to enable you to turn it. In some submerged types where I thought dissection would be needed I have used the plan of running a tenaculum through the fenestra of the La Force; then having the assistant hold the La Force out of the way and one hand holding the tenaculum forceps, with a sharp knife making a circumcision of the tonsil and loosening up the submerged tonsil. Then the tonsil is pulled through the fenestrum of the La Force instrument. You will have less hemorrhage than where you make your dissection and slip your snare over. However, in the vast majority of cases, no dissection is needed.

DR. DEAN W. MYERS: It is very important to have plunger blade closed as far as possible before you put the instrument into the throat. In other words, make the fenestrum as small as possible and force the tonsil through it. Get the tonsil on top of the fenestrum and work it through. When the tonsil is completely through, there will seem to be a slight pitting or dimpling of the anterior pillar.

DR. GEORGE C. WEBSTER, JR.S I had the same experience that Dr. Myers had, but not with the La Force instrument. I was looking for an instrument working on that principle and had the Sluder. That instrument would bend and I had a great deal of trouble with it, but I

never had any trouble with the La Force bending. The other blade should be very sharp. It is for cutting purposes and the blunt blade is behind it. I agree with Dr. Myers that the instrument is not to supplant a dissection, and it is not applicable to all tonsils, but when it can be applied and the blade is forced down you can tell whether you are going to get that tonsil or not by a dimple which will occur in the anterior pillar. If you don't get that you better take it off and do your dissection. As Dr. Myers suggested, it is also necessary to keep the instrument across the mouth until you have engaged your tonsil and pushed it through the fenestra then force your blades forward. I think the object of the operation is also foregone if you attempt any dissection. If you put a tenaculum on the tonsil and pull it forward you defeat your purpose because the La Force can not then invert the tonsil.

SECRETARY: I only use the tenaculum in cases where I have failed without dissection, or where I feel I might fail in getting out all of the tonsil. In other words, I use the La Force instead of the snare in some cases, because of the bloodless features. However, in my more recent cases I find that I need dissection in but few instances.

DR. WEBSTER: I had tried it with a partial dissection and put a tenaculum on to pull it through the fenestra, but this was not attended with as satisfactory a result.

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WILLIAM McLEAN, M. D., O. ET A. CHIR.

WILLIAM McLEAN was born in Cambridge, N. Y., May 20, 1876. He received his early education in the Cambridge Union School and the Cambridge Washington Academy. At the age of fourteen he moved to Gloversville, N. Y., and entered the Gloversville High School. He left school to take up a mercantile life, which was followed for twelve years, during which time he learned the trade of watch-making.

In 1902 he entered the New York Homœopathic Medical College and Hospital, from which he was graduated in 1906, and the next year took the course at the New York Ophthalmic Hospital, from which he received the degree of Surgeon of the Eye and Ear in 1907. At the close of his sophomore year he entered the office of Dr. A. B. Norton and remained as his assistant until 1912.

Dr. McLean's familiarity with the small tools of the watch-making trade has been of inestimable value to him in his work as specialist in the eye and ear. He has enriched the field of his specialties by the introduction of several appliances, among which are the color-field charts used in perimetry. In 1914 he introduced the McLean tonometer, the first one of which was made at his work-bench. This model was exhibited at the O., O. and L. meeting at Atlantic City.

Today the McLean tonometer is being used almost universally—in America, Europe, Australia, India, South Africa and South America.

In the spring of 1919 Dr. McLean received an invitation from the Master of the Oxford Ophthalmological Congress to present a paper on his experimental work in tonometry at that Congress in July. This was quite an honor for our President. His reception by the English ophthalmologists was most cordial, and his paper most favorably received.

G. W. M

Editorial

A MESSAGE FROM THE PRESIDENT OF THE O., O. AND L. SOCIETY.

THE year of 1920 is now fairly well under way, and in a time much shorter than it now seems the month of June with its O., O. and L. Convention will be here. The beautiful city of Cleveland has been chosen as the meeting-place of the Institute and our O., O. and L. Society. The Hotel Statler will be the official meeting place, and a room with a seating capacity of 180 has been secured for us adjoining the main meeting room of the Institute.

Last year under the able Presidency of Dr. Denman a most excellent meeting was arranged, and as these are years of great strenuosity and push it is up to every member of the O., O. and L. to see to it that our standard, already high, for interesting papers for the scientific part of our annual meetings is placed still higher. In order to accomplish this every member should put forth his best effort toward making the 1920 meeting "the best ever." Begin today. Decide what you will present in the way of a paper, any new instrument, or any unusual cases. Write the Secretary stating what your part of the program will be, and do it now.

Every member of the Society is indebted to Dr. Mackenzie for his untiring energy and push in reviving our JOURNAL. We need the closer relationship that the JOURNAL offers, with its monthly communications which keep us in touch with one another. With the JOURNAL we shall be better able to keep abreast of the times. Every worker along our special lines is proud of the standard Dr. Mackenzie has attained for our JOURNAL, and if we will give him our wholehearted support he has promised to make the JOURNAL maintain the same position that it held before it was stopped on account of the war conditions.

Have you been alive to see to it that the optician who looks after the correct making of your patients' lenses has a place in the opticians' directory? This is a new feature of our JOURNAL and the opticians are eager to be represented there. By having your optician repre-

sented in the directory you can be of service to him, and in turn he can be of service to the JOURNAL. The JOURNAL needs your support, and you need the JOURNAL. Boost the JOURNAL.

W McL.

A SALUTARY WARNING.

WITH the January issue the new, or, rather, the resurrected JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY made its appearance or reappearance to the membership of the O., O. and L. Society and its friends. This is, indeed, an important epoch in the history of the Society. The resumption of publication by the Society of its own JOURNAL is especially gratifying to the writer, for it fulfills his earnest desire that the most necessary thing be done for the perpetuity of the O., O. and L. organization. It was the principal recommendation that I made in my presidential address in 1919, and, thanks to the Committee on Presidential Address—men of keen business discernment, these recommendations were immediately—during the session—started in process of action.

A rather complete history of the JOURNAL may be found in that address in the preceding issue, but in order to do justice to the former publication and to the *Journal of The American Institute*, I wish to repeat a portion of it here.

The men who took over the JOURNAL in 1914 made every effort to make it a success at personal sacrifices of time and money. Its cover was changed and new type and the best quality of paper was used. The editorial pages under the highly efficient editorship of Dr. George W. Mackenzie and his associate editors sparkled with timely matter, while Dr. McCleary's well-known business acumen, assisted by team-work on the part of the owners in acquiring advertisements and cards, finally brought the right-hand column up with the left-hand and erased the red lines which at one time were drawn below a deficit of more than three thousand dollars.

It was just at this time, when the JOURNAL was out of debt and self-sustaining on the financial side, that the war began; and as a scientific publication let me say emphatically that it was second to no other Journal in the whole field of Ophthalmology, Otology and

EDITORIAL.

Laryngology Journals of all schools of medicine. I repeat that the JOURNAL, the only homœopathic publication of its kind in the world, was the best one in its field in existence when the dire effects of the war began to be substantially felt. Many of our men were in service: their pen contributions stopped and then dues were remitted. Advertisers in line with general retrenchments refused to renew their contracts. So before the blow fell the JOURNAL's management sought cover.

There is nothing more natural, because it is instinct, when real or imaginary dangers threaten the chick than for it to seek shelter under the mother's wing. There is nothing more natural, because it is instinct, than for that mother to raise her wing and hover the chick. Most mother-hens also, we believe, are willing when the storm has passed to release the chick and again allow him to go it alone. Well, this familiar metaphor illustrates quite well what happened and is happening now in our history. The *Journal of the American Institute*, our maternal ancestor, very kindly took us in as a supplement. Whether or not this arrangement was to be permanent no one knew. The *American Institute Journal* seemed quite willing to care for us as it is in the line of correlation of all homœopathic interests, which is a leading policy of the *Institute* now, and no doubt is a wise and just policy. The fact is an outstanding one, however, that it is not a healthy working-plan for the O., O. and L., and the reasons as stated more fully in my address are given briefly here.

Many O., O. and L. members are not members of the *Institute*—therefore do not receive its *Journal* nor the O., O. and L. reading matter, which is its supplement. Other members of the *Institute* do not subscribe to its *Journal*; one cannot imagine why, for it is an excellent publication. So from these two unfortunate conditions the unpleasant information was obtained that only fifty-eight O., O. and L. members out of a total of nearly two hundred and fifty were receiving the *Journal of the American Institute of Homœopathy*, which through its supplement was the only means of reaching them.

The signs of deterioration and ultimate dissolution of our beloved Society were positive and unmistakable to one who has been in close touch with its affairs for five years,—four years as secretary, and one year as president, as I have been. Its salvation, in my earnest

judgment, lies in the closer corporate union of its membership, which only the monthly receipt and perusal, by each member, of a live Journal can bring about. This is a necessity which needs no argument. It is among the first things that every organization, scientific, economic, artistic and religious, does to establish its existence and to maintain its growth. As appreciative children we cannot even temporarily sever our relations with our maternal protector without an expression of gratitude for the real service rendered us and to the great cause of Homœopathy of which we are a part. We trust that our going will cause a slight pang rather than a feeling of, "Good riddance to bad rubbish," but also that the pang, if any there be, will soon be forgotten while we are bidden God speed.

In closing let me disillusion you, fellow members, if you are imbued with the secure and tranquil feeling that all is over and the JOURNAL'S future is assured. All hope of such assurance centers in its able and philanthropic editor, Dr. George W. Mackenzie, but he alone cannot carry it on to success. It will require team work and individual effort of all the membership. Forget now, if you have such an erroneous idea, that you can depend upon a certain few men. You cannot. It is your JOURNAL. It will stand or fall just as your attitude is for or against it. It will play no favorites. It is up to you.

IRA O. DENMAN, M. D., F. A. C. S.

PATHOLOGY--WHERE TO GET IT?

RECENTLY while preparing a paper on aural syphilis the occasion required some reference to the pathology. In looking up the written pathology on the subject it was found that nine-tenths of it appeared in the German literature,—the remaining one-tenth in French or some other foreign language. The nearest approach to anything in English was not only meagre, but unreliable, and is so considered by the more recent investigators and in the light of more modern laboratory methods. No attempt has been made by any American pathologist to investigate this most important subject.

As pointed out in the paper, there is a wealth of clinical observation awaiting pathologic confirmation, which would have the

effect of increasing considerably the sum total of our knowledge of aural syphilis.

What may we conclude from this condition of affairs? Nothing else than that the Germans are ahead of us in the knowledge of the pathology of this particular subject. Most of us who have looked about somewhat will concede that the knowledge of pathology possessed by the Germans in our special field—eye, ear, nose and throat, far exceeds that which we possess. Let us put it in a rather more agreeable form—we have not yet reached the same stage of pathologic knowledge as the Germans. What institution or individual in this country is attempting to improve the opportunities for the study of pathology? If anyone can inform us on this point we will then know just where to send our students to get it. Until such time ninety-nine and forty-four hundredths per cent. of our literature on the subject of pathology will continue to be, as in the past, nothing more than a re-hash of what has been previously cited in the foreign-tongue journals. Still, many of us continue to boast about our being the most enlightened people in the world.

G. W. M.

THE MEDICAL PRESS AND NEW MEDICAL IDEAS.

AT this time when the world's "pot-of-ideas" is bubbling up and boiling over there comes to our attention strange, so-called advanced ideas and utterances which in our previous quiescent state had been ignored as radical. Prejudices become crystallized and many minds are firmly shut out from any future possibility of rationality. Ultimately the controversy simmers down to the old familiar drone of "freedom to express your own ideas." Up from the bottom of the pot comes a more or less substantial sediment that has been quietly collecting for some time. The mixture in the pot seems to be spoiled; certainly it is greatly "agitated." The appearance of this sediment is often a surprise, for until now it has gone unnoticed. The sober onlooker who is often so complacently optimistic becomes rather alarmed, and he with others of his kind realize that it is time for him to do a little thinking and to lend his sobriety to this occa-

sion. Whereupon there appears the expected reactionary thrust to thwart this radicalism before it has gained any foothold. From this moment the controversy is on, and an undue amount of complaint and accusation arises. We hear again the usual platitudes, "freedom of speech," "muzzling," "predatory interests," "entrenched conservatism," etc.

Here we touch a note in which we can do a little thinking from experience in our own affairs.

Of late we have seen the development of strong local, state and national medical societies, with a concentration of power, a community of thought, and with a force of policy that leads, directs, controls and restricts. We are impressed by the power for good that such organization can do; their press carries far and wide the most substantial medical information; it unifies the system of practice. But now there is beginning to appear that ominous beast "Censorship." The more elite societies are enduring it, and a number of society journals,—especially the greatest society journal,—are favoring it. It is not without good reason that censorship has been accepted, but we believe that it is without a due regard to what the ultimates of its effects will be. Unfortunately, in nearly every human thing there are the composites of good and bad. Things are usually not altogether good nor altogether bad. Radical censorship centers almost wholly on two things. 1, New ideas and methods, and 2. Advertisements. As to the thwarting effect that censorship and antagonism has on the former, the presentation of new ideas and new methods, it is merely necessary to point to the great progress made in new medical fields by the liberal West as compared with the slower conservative development in the East. We are not speaking unguardedly when we say that the younger medical men in the east are decidedly timid about presenting something new before medical meetings in the large centers. As to the censorship of advertisements, is it not a fact that both the education of the profession and the education of the public has largely made it impossible for the unscrupulous patent medicine firm to "put over" their worthless wares? Is it not the experience of professional men that the many reliable drug houses selling special and proprietary articles are anxious to handle only such goods as are reliable, honest, and ethical in every respect? The secret proprietary

formula has about disappeared; frankness and intrinsic worth have been substituted as the policy of drug houses.

If the liberal spirit of the times can bring us anything let it be a tolerance of the opinions of others, without undue fear for the deception of our professional brothers or of ourselves, so long as we are conscious that the medical practitioner has enough mentality to do some thinking and choosing for himself. Let us accept certain disadvantages; this will bring—and be sure of—a little more rapid advancement in new fields.

It would have been future ignominy to us had our citizens before we entered this war restrained the nobler spirits, those free lances, unsung and unheralded still, who volunteered to fight for our allies while we were yet too ill prepared physically and spiritually to get in.

“There’s an army that’s never been listed,
That knows no colors or crest,
Yet, broke in a thousand detachments,
Is leading the way for the rest.”

—D. M.

PROCEEDINGS OF THE THIRTY-SECOND AN-
NUAL SESSION OF THE AMERICAN O., O. AND
L. SOCIETY, ASBURY PARK, N. J., JUNE 16,
17, 18, 1919, NEW MONTEREY HOTEL.

(Continued.)

TUESDAY, JUNE 17—MORNING SESSION.

The President called the meeting to order at 10:09 a. m., and requested the Secretary, Dr. Neil Bentley, Detroit, Mich., to read paper No. 9, entitled "A Study of One Thousand Tonsillectomies Operated by the Author," by Dr. Everett Jones, Boston, deceased.

THE SECRETARY then read Dr. Jones' paper.

The paper was discussed by J. Ivimey Dowling, A. B. Clapp, and the President.

THE PRESIDENT: At this stage in the program I desire to call to the chair Dr. A. E. Cross, who so ably assisted in preparing this program, as Chairman of the Section on Ophthalmology.

DR. ALBERT CROSS, Worcester, Mass.: The next paper in this Section will be by Dr. Suffa, of Boston, "The Synergetic Action of the Ocular Muscles."

DR. GEORGE A. SUFFA then read his paper, entitled "The Synergetic Action of the Ocular Muscles."

Discussion by G. W. Mackenzie, De Wayne Hallett, Albert Cross, G. W. McDowell, D. W. Miller, J. R. McCleary, and the President.

DR. J. IVIMEY DOWLING read a paper entitled "A New Operation for Soft Cataracts."

Discussion by Ralph I. Lloyd, G. A. Suffa, A. B. Clapp, C. L. Rumsey, De Wayne Hallett, Jos. E. Sternberg, and the President.

DR. BURTON HASELTINE read a paper entitled "Results of the Dowling Tampon in Nasal Work in Army Hospitals."

Discussion by J. Ivimey Dowling, A. B. Clapp, De Wayne Hallett, G. W. Mackenzie, Neil Bentley, D. W. Miller, and the President.

DR. W. L. ROTH, Wilkes-Barre, Pa., read a paper entitled "Faulty Technique in Tonsil Dissection."

THE PRESIDENT: I wish to call your attention to a new instru-

PROCEEDINGS OF THE THIRTY-SECOND ANNUAL SESSION.

ment manufactured by Mr. Woolf, 516 Fifth Avenue, New York, of the firm of Woolf Optical Instrument Company. The name of this instrument is the Skioptometer.

The discussion on Dr. Roth's paper by Howard Ivins and George J. Alexander then proceeded.

Dr. Cross relinquished the chair to the President, Dr. Denman.

THE PRESIDENT: We will adjourn to meet at 2 o'clock.

Adjourned.

TUESDAY, JUNE 17—AFTERNOON SESSION.

THE PRESIDENT, Dr. Ira O. Denman, called the meeting to order at 2:30 p. m.

DR. HENRY L. GOWENS, JR., Philadelphia., read a paper entitled "Care of the Eyes of the Adult."

Discussion by Dr. William A. Muncy.

At this juncture the President asked Dr. George A. Suffa, Boston, to take the chair.

Discussion continued by W. R. Noyes and H. D. Schenck.

DR. A. W. LAFORGE read the discussion on his paper, "What the Nose and Throat Specialist Can Do in Tuberculosis," by Alfred Lewy, Chicago, Ill.

Discussion also by G. A. Suffa and Neil Bentley.

DR. THOMAS L. SHEARER read a paper entitled "Fluorid of Calcium in the Treatment of Aneurysm."

Discussion by G. W. McDowell, Byron G. Clark, C. Leslie Rumsey, Ralph I. Lloyd, and W. T. Rogers.

DR. GEORGE W. MACKENZIE, Philadelphia, Pa., read a paper entitled "The Value of the Weber, Schwabach and Rinné Tests in the Functional Examination of the Organ of Hearing."

Discussion, later, by Geo. C. Webster, Geo. A. Shepard, Ralph I. Lloyd, L. E. Hetrick, Wm. F. Beggs, and the Secretary.

The President invited Dr. De Wayne Hallett, in charge of the program at the New York Ophthalmic Hospital, for Thursday, June 19th, to describe the cases he proposed to show. Dr. Hallett then addressed the members.

DR. GEORGE W. MCDOWELL, New York: First, having had nothing to do with the preparation of this program, and being more or less

outside of his operative sphere, I would like to call the attention of the members that this has entailed a great deal of work, and to Dr. Hallett, largely, all of the credit is due for the preparation of this program. He has been insistent, both in and out of season, to get the men to bring cases for operative work and clinical display, and I am sure that the men who see the cases will appreciate them and desire to give a vote of thanks to Dr. Hallett.

THE PRESIDENT: Since we are now assembled and in anticipation of this rare treat we at this time desire to tender to Dr. Hallett, in advance, our sincere, heartfelt vote of thanks for the work he has accomplished. All in favor will please stand up.

(All present stood up making it a unanimous vote of thanks to Dr. Hallett.)

PRESIDENT: On your program for to-morrow, the sixth session at 2 p. m., is scheduled to begin here with a business session. We have had to change that because of a telegram from Dr. Chevalier Jackson stating that he could not arrive here until to-morrow at 2 o'clock. The session will begin at the Ocean Theatre on Fourth Street, with Dr. Jackson's lantern demonstration, followed immediately by Dr. Burton Haseltine's talk on "Unscrambling the Army." After that we come here and simply begin where the program says we begin at 2 o'clock.

There is a gentleman present who has something to show us. I would like to introduce Mr. Woolf, of New York, who has a new instrument for refraction. Those who are interested can see him after the session.

Mr. Woolf then proceeded to talk concerning the Skioptometer, after which the discussion of Dr. Mackenzie's paper was proceeded with.

DR. GEORGE C. WEBSTER read a paper entitled "Tonsillectomy With the La Force Instrument."

Discussion by Dean W. Myers, W. H. Williams, C. Leslie Rumsey, and Neil Bentley.

THE PRESIDENT: We are going to hear from one of our members who has become distinguished. He does not know that I am going to call upon him. Fame carries certain penalties with it. Therefore, Dr. McLean must come forward and tell all about his invitation to

the Oxford Ophthalmological Congress by Colonel Elliot, to explain and demonstrate his instrument at that Congress. ,

DR. WILLIAM McLEAN, New York: You certainly have caught me unaware. I don't know that I have anything special to say. In explanation, I might add that I read a paper on the subject of experimental tonometry and intra-ocular pressure, last winter at the New York Academy of Medicine, by invitation of the Section of Ophthalmology. I also received an invitation to read a paper on that subject, from the New England Ophthalmological Society, of which our Drs. Wells and Cross are members. That meeting was held at Boston at the Eye Infirmary. At both of these meetings I was very well received. The Archives of Ophthalmology asked the privilege of printing the paper I read at the Academy of Medicine.

About six weeks or two months ago I received a letter from Lt. Colonel Elliot stating that he had read my paper in the Archives and asking me if I would come over to England and read a paper on the subject of Tonometry before the Oxford Ophthalmological Congress, which will meet on July 9, 10, 11, at Oxford. By reason of the work he has done on glaucoma, Col. Elliot wrote that he is especially interested in tonometry. I accepted the invitation conditionally on my ability to obtain a passport and return transportation.

The passport has been received and I intend to leave on the Aquitania a week from Saturday. The tonometer in question is the one developed from the instrument I showed first at our meeting at Atlantic City. It has had a very gratifying sale. Some of our men have been disappointed at not receiving the instrument on placing an order. The manufacturers have received more orders than they were able to supply. Three times they have had to double their estimation of the quantity of instruments to supply the demand, and when they thought they had everything working on a satisfactory basis for delivery, the Government stepped in and ordered 200 which again upset the calculations. That explains why the doctors failed to get prompt delivery to their orders. The Government order has been filled and it is expected that from now on the orders will be filled promptly.

PRESIDENT: Tell us the variance in your instrument and the others upon the market.

DR. McLEAN: One way in which this instrument differs from the others is that it is a direct-reading instrument. Those of you who have used the Schiotz or Gradle-Schiotz know that to obtain a full range of readings four weights are required. In my instrument the same full range of readings is obtained without resorting to a change of weights. In other instruments the readings are made on an indifferent scale and transposed by means of a chart into millimeters of manometer pressure. In my instrument these readings of intraocular pressure are made directly on the scale in millimeters of manometer pressure of mercury. There are also other differences; for instance, the millimeter scale is placed as close to the foot-plate as possible so as to facilitate the reading of the instrument, also the foot-plate is constructed on a different curve from the others, and there are other mechanical differences.

There is another thing that should not be confounded with the other instruments. The limits of normal intraocular pressure with my instrument are not the same as those fixed for the Schiotz or Gradle-Schiotz, and the scales are not equivalent. I asked Gradle how he obtained his values for his scale, and he replied that he was unable to obtain a satisfactory means of testing, so used a Schiotz to obtain his figures for intraocular pressure. Therefore, the readings of those instruments are supposed to be identical. The readings on my scale were obtained by taking an average from experiments made on eyes in direct communication with a manometer. I have found that these results are in harmony with those of the earlier experimenters on intraocular pressure. When Schiotz brought out his instrument he introduced a new value of intraocular pressure, and we had to readjust our previous findings to his instrument. The instrument I brought out reverts back to the older ideas of intraocular pressure.

I have recently made some experiments on animals, using cats and dogs, where I connected the manometer by means of a canula to the interior of the eye. These are the experiments which I expect to tell about at Oxford.

SECRETARY: Why is it that in making tests with the instrument the first reading will be, say, 30 mm.? A second reading taken in a few minutes may be less?

DR. McLEAN: That is true of all instruments. You may remember in a paper by Dr. Schoenberg he used that process of drainage as an index of the presence or absence of glaucoma. He figured out that the weight of the tonometer on the eyeball increased the drainage from the eye. On that as a basis he computed the relative rate of filtration of glaucomatous and non-glaucomatous eyes in a given period of time. Those giving a more rapid rate of filtration and thus lowering the intraocular pressure under the weight of the tonometer being in a less dangerous condition than one which showed no increase of filtration under the weight of the instrument.

SECRETARY: How long do you advocate using holocain before using the instrument.

DR. McLEAN: Before making a tonometer reading I instill a drop of 2 per cent. holocain in the conjunctival sac. About a minute is allowed to elapse before the reading is made. In my office I use an Allison chair instead of having the patient recline on a table. The chair is tipped backward, having the body and head of the patient in a comfortable position so that the eyes can look directly upward at the ceiling.

SECRETARY: I always waited exactly ten minutes. That is all wrong then.

DR. McLEAN: I would consider it better not to wait so long as by that time the effect of the holocain might be on the wane. Not more than two minutes need be consumed for the entire examination with the McLean tonometer. Some oculists have informed me that since becoming accustomed to my instrument they are making many more tonometer readings than formerly, because so much less time is consumed with the reading and the scale is so easy to read. One can almost make the reading without any anesthetic, and not more than one drop is necessary, unless the intraocular pressure be very high.

DR. GEORGE W. MACKENZIE, Philadelphia, Pa.: Do you ever use cocain instead of holocain?

DR. McLEAN: No, I never use cocain where I suspect glaucoma. I have known of two cases of glaucoma which were probably induced by the instillation of cocain. One was where cocain was used for the removal of a foreign body from the cornea. In that case the patient in telling of the symptoms suffered recited a full picture of the sub-

jective symptoms of acute glaucoma, even to the nausea and vomiting. I don't believe a single symptom was omitted. However, about a year later that patient developed acute glaucoma in the other eye. With the other case, cocain had been instilled for the removal of a chalazion. In both of these cases the glaucoma followed instillations of cocain within twelve hours.

PRESIDENT: We have with us two of our valiant soldier members—Dr. Ritchie and Dr. Metzger. I will ask them to speak.

DR. FREDERICK G. RITCHIE, New York: I do not know that the work which we had at Camp Upton differed materially from that of the other camps. It was mostly routine work. We had some very interesting cases, the narration of some of which may be of interest to you. The first is that of a case of temporary color blindness.

A medical officer presented himself for the routine examination customary on arriving in camp, and, upon testing his color sense by means of the Jennings's Self-Recording Color Test, he showed a complete color blindness, with the exception of that for yellow. I then used the Stilling's Pseudo-Isochromatic Charts with the same results, and finally gave him the colored test objects which are used with the Schweigger Hand Perimeter, and the yellow was the only one that he could name correctly. Of course, I sent in my report as per my findings, while he was much perturbed at the result of the test. Three days later he came into my department and asked me if I would allow him to take the test again, saying that he did not question the findings of the previous tests, but that he had never before experienced any difficulty in matching colors, and, for his own satisfaction, would like to take the test again. I replied that I would give him as many trials as he wished, and proceeded, using the identical tests which had been used at the previous examination; the results showed his color sense to be absolutely normal. I asked him: "Is there anything or anyway by which you can account for this temporary color blindness?" He replied, "There is only one thing that might account for it. I left at home a wife and a little baby that was just commencing to be interesting, and my wife was very much depressed at our separation; furthermore, I had been travelling for three days and three nights during which time I did not get a wink of sleep. My mental state, to which was added the loss of sleep, is the only

causative factor to which I can attribute it." In looking up what literature I had at my disposal on the subject, I found in an article in the *Encyclopedia of Ophthalmology*, under the caption, "Color sense and the emotions," that Taylor, of Sydney, Australia, had observed that there was a great lack of emotion in those who were color blind, and cited as contrasting examples Melba and Dolores. He stated that he had noticed that those of his friends who were color blind did not seem to be emotionally affected, and he resented their lack of warmth and joyousness; there seemed to be a dulled condition of this emotional sensibility. This observation of Taylor called attention to the effect of color blindness upon the emotional sense, while this case of mine exemplified the effect of the emotions upon the color sense.

I met with three cases which rather puzzled me, inasmuch as I had seen nothing similar in the thirty years in which I had been engaged in ophthalmic practice. These cases presented with a raised, dead, yellowish-white plaque, looking very much like a dense membranous formation, on the palpebral conjunctiva; also a similar area, registering with it, upon the ocular conjunctiva, situated upon a slightly inflamed base. These areas went on to a necrosis, were thrown off, and the ulcer healed in the course of a week or so. The clinical diagnosis was infective conjunctivitis. A small section of tissue from the infected area was sent to the pathological laboratory for examination, and the report came back "streptococci." The cases were exhibited at the weekly clinical meeting, held in the Red Cross Building, as a new form of infective conjunctivitis. Some time later, while looking over the January number of the *Archives of Ophthalmology*, I found recorded three cases of a new type of conjunctivitis reported by an Italian (?) ophthalmologist, which he termed "infective necrotic conjunctivitis," and stated that he had discovered and isolated the offending micro-organism. The failure of our laboratory to find the characteristic micro-organism might be attributed to lack of knowledge of the proper technique, or, under the pressure of work, lack of care in the examination. These three cases and the three reported by myself are the only ones of this type of which I have any knowledge.

There was plenty of work to keep one occupied. I think, from

what I heard, that those officers in charge of the Ophthalmological Service in the various camps found it difficult to get an adequate number of trained medical officers as assistants, to say nothing of the lack of office personnel.

I took charge of the Division of Ophthalmology at the Base Hospital, Camp Upton, N. Y., on September 22, 1917, and had assigned to that service two officers, very good men, both of them from Philadelphia. On moving from our temporary quarters in Camp to the Base Hospital, one of my assistants was detailed to the Special Examining Board, as the ophthalmological member, while the other was left with me for a short time, but the frequency of the arrival of the increments from the Local Draft Boards necessitated his presence in camp on the Examining Board, leaving me to run the service at the Base Hospital. Inasmuch as I was running, at times, 120 patients in the Out-Patient Department, and had my ward work, consultations and paper work to attend to, you can imagine that I was kept fairly busy, but for a number of months I managed to "turn in" anywhere between 1 and 2 a. m. It was strenuous work for awhile, but I would not have missed it for anything in the world. The class of cases which you meet with in the construction period of an army is something different from that in civil practice. The latter brings to you those who are seeking relief from ocular trouble; the former includes a considerable number of those who are endeavoring to evade military service, malingerers, who are trying their best "to put something over on you," consequently it was a battle of wits a good portion of the time.

DR. IRVIN D. METZGER, Pittsburgh, Pa.: I am here on leave of absence from Camp Taylor, which is located in Louisville, Ky. This camp is one of the large camps, having from 70,000 to 80,000 soldiers up to the time of the signing of the Armistice. This camp was used as a replacement organization, from which soldiers were constantly being sent abroad. Most of these organizations have now returned and have been demobilized. During the last six months I have been engaged largely in examining the eyes of these soldiers as a member of the disability board. Some interesting cases presented themselves for this examination. As my superior officer has just stated, we frequently found soldiers who were trying to put over some conditions

which we found did not exist. As you all know, malingering was a common occurrence in the army. The work on the disability board, however, did present frequent cases of unusual consequence. Cases were admitted to the service which had such large amount of error in vision as to make them entirely unable to perform the duties required of them. Such cases could easily pretend to have lost some of their visual acuity while in the service. Critical investigation assured the examiners that not infrequently the condition existed before entrance to the army, and that the fault lay in the superficial entrance examinations of the various local boards. Once in the service the critical question becomes that of determining whether or not any disability developed while in line of duty. If so, the soldier is entitled to compensation. The amount allowed varied in proportion to the amount of disability. The total loss of one eye was usually given a disability of 25 per cent., both eyes 100 per cent. Several interesting cases were recently observed in which optic atrophy was evident. These generally were ascribable to tertiary syphilis. In these cases the disease was contracted years before, but these tertiary symptoms, fortunately for the patient, became evident during his time of service. Although the latent disease was present in the system at the time of his entrance into the army and might have been discerned by critical examination, the patient was accepted as being in perfect health and the burden of proof as to the priority of the disease rested on the Government. Other similar conditions presented themselves from time to time, making the work not only interesting but instructive.

You will all recall the big poster in which Uncle Sam points at you and says, "I want you?" One of the officers remarked, "Damn it, you have got me; when are you going to let me go?" Most of the medical officers, I think, have had a similar feeling ever since the big show closed in Europe. Most of us, however, are willing to remain as long as we can be of positive benefit to the boys in the service and to the Government in its effort to make a satisfactory adjustment of future compensation with those who were injured.

The duties at the Base Hospital presented various types of work with the opportunity of holding and treating cases until all possible benefit had been secured. Consultations were numerous. The practice of "passing the buck" is well known to all those in the service, so that

every department of the Base Hospital utilized the privilege of securing frequent consultations. The system of record keeping, which is a very excellent one, kept everybody busy and worried. The half-hearted method of keeping records, which is frequently noted in the civil hospitals, would not pass in the army hospitals. We had approximately 125 doctors associated with the Base Hospital. We messed together and chummed together and consulted with each other, yet no one attempted to determine the school of medicine to which you happened to belong. All were styled doctors, and were happy in the cheerful *esprit de corps* manifested in our professional and social life. My ranking officer in the eye department was a homœopath and a good fellow. Majors are not supposed to work in the army, so the captains had plenty of work to do. The eye department was well equipped with instruments, literature and all appliances essential to satisfactory work.

I am glad indeed to be here and I hope when the next war comes, which let us hope will be never, we may all have another chance.

DR. FREDERICK G. RITCHIE: When did you get all your equipment? I got my operating table about a year after I entered the service. I brought back with me five cases of my own belongings which I had carried out to camp with me from time to time. When I organized the service there was practically nothing to work with; there was no atropin in camp except some hypodermic tablets, and some cases of iritis having presented for treatment, I had to go to New York and get a supply from my office. On making out a requisition for drugs which I considered absolutely necessary for eye work, I was informed that I would learn that, in the army, I would have to get along with what there was. Eventually, however, my supply of drugs, while not complete, was satisfactory.

DR. L. E. HETRICK, New York: I have just finished 23 months, nine on the other side. My experience has been most varied. I have done most everything from driving a four-mule team, digging ditches and building roads, to enucleations, etc. I started my career at Fort Benjamin Harrison in the first Officers' Training Camp. First three months there and went from there to Camp Lee in the base hospital in the eye department for about seven months. We must have been extremely fortunate at Camp Lee, somewhat along the lines of Dr.

Metzger, because our head building, or the eye, ear, nose and throat and dental department were located with full equipment. We had everything you could want, all sorts of instruments, plenty of atropin, ophthalmoscopes, perimeters. The dental laboratory was equipped with the most up-to-date hydraulic chairs. Hospital capacity of 3,000 patients and a wealth of material. At first our duties were as a consultant board to the examining board of the first draft, and as Dr. Ritchie and all of us experienced, we had innumerable cases of malingering. Many came from North Carolina, Virginia and Western Pennsylvania. We had a mixture of southern poor white trash, together with a bunch of Russian Polak expert malingerers from Pennsylvania. They had the game down to a science, and it was a game of wits from start to finish. I think I had a unique experience. I ran across a man who wanted to go into the service. His eyesight was very poor. He memorized a half dozen different test cards, and it was only by accident I discovered he was faking me with his left eye. His actual vision was something like 8/200, and he was reading 20/20 on half a dozen different charts. The last part of my time at Camp Lee was spent in the administration end of it. That was also very interesting. For a time I was post exchange officer. I sold candy and peanuts. I think the only thing I didn't get was mess officer. We went on the other side with base hospital No. 48. When you get into the army hospital it doesn't make any difference whether oculist or aurist. We landed at Mars-sur-Allier on Thursday evening with orders to open up unit No. 1. On Sunday night we received word to detach fifteen surgeons to send to front on team work. Monday morning, with no equipment, excepting the instruments in our medical belt and one field operating chest, we received 460 severely wounded patients from Chateau Thierry. The only antiseptic we had was salt. Fortunately, we had plenty of dressings, so we could change dressings frequently. At this stage of the game I acted as adjutant, police officer, head of the eye and ear department and doing all of it and as ward surgeon.

Adjourned 6:15 p. m.

(To be concluded in March number.)

A Case of Acute Mastoiditis at the age of 84, cured by operation
is reported by Dr. E. J. Butler, of Cambridge, Mass.

CALCIUM FLUORID IN ANEURYSM.*

THOMAS L. SHEARER, M. B., C. M., EDIN., F. A. C. P.,

Baltimore, Md.

SOME four months ago a celebrated chef, A. V., aged 58 years, consulted me for a very severe and most distressing cough, which attacked him at times most unexpectedly and with such a degree of violence as to almost cause him to lose consciousness. The sound was of a mixed bronchial and laryngeal character, such as one hears in a croupy child, but it was accompanied by flushed face, oppression in breathing and a sensation as if suffocation would ensue. Occasionally, pain in the region of the sternum was experienced, and for a few days he had alarming attacks—crushing cramp-like agony—in the region of the heart, extending upwards towards the neck. The least exertion made him short of breath, and he had constantly before him the fear of sudden death. Patient had lost considerably in flesh, and the face wore a troubled, tired, anxious look; owing to general muscular weakness he was compelled to give up his public work, as he was unable to remain on his feet during the long hours which are usually demanded of a chef. In addition to this, however, he felt more comfortable about his heart when he was sitting in a chair, because, it afterwards transpired, in this position the downward pressure of the heart was better supported and the sensation of fullness near the diaphragm somewhat relieved. On questioning him, he stated that for years he had been a steady hard drinker, and while he knew that such a practice was injurious to him, he thought that as he was such a strong, muscular man he would be able to weather the storms resulting from such excesses. Fortunately, he had never contracted any of the venereal diseases. Living in this way he did not experience any special evidence of his dissipation until about two years ago, when on coming out very late at night from a hot kitchen into the chilly, snowy air, he was compelled to wait a long time on the street corner for a car. He became ill, the result of a heavy cold, and he has been

*Read at the meeting of the O., O. and L. Soc., Asbury Park, N. J., June, 1919.

in bad health ever since. He entered a hospital later on and was treated for a "laryngeal attack," which must have been very violent in its nature.

On examination, the eyes showed a difference in the size of the pupils; the right one being contracted and small while the left one was of moderate size. The pulse was about 78, of equal strength in the two radials; the diastolic blood pressure 80; the systolic 125. The chest, anteriorly, on inspection, showed the right side to be more prominent than the left side; the veins on the surface were enlarged, very tortuous, and extended in this way down as far as the lower abdomen. Pulsation is seen slightly over the right-sided fullness. On palpation, expansile pulsation is plainly felt over the upper part of the sternum and over the region of the 2nd and 3rd right costal cartilages, gradually fading away towards the right over the area as outlined by dullness on percussion; this comprises all of the region from the *left* border of the sternum to a point $5\frac{1}{2}$ inches to the right, and from a point just below the right clavicle vertically downwards for about seven inches. The percussion note is quite flat and imparts the sensation or impression of increased resistance to the hand. The heart appears to be enlarged, as the apex is beating at a point about three inches below and to the left of its usual location. The heart sounds are distinct and normal, with the exception of the aortic second, which is accentuated markedly. The heart sounds are transmitted all over the area on the right side, but there is no bruit or murmur. Tracheal tug is only slightly to be made out. Posteriorly, there is an area on the right side between the spine and the scapula at its upper part where the heart sounds are well heard. A systolic thrill is absent, as is the case in about half of such patients, and we may therefore assume that a large re-enforcing lamellated clot must be present, for thickness of the laminae of fibrin governs the presence or absence of adventitious sounds. Furthermore, the thrill is more apt to be found in the fusiform aneurysms than in the sacculated type. Auscultation of the chest generally revealed strong, coarse sounds as if breathing were taking place past an obstruction—as if something were pressing against the bronchi; there appeared to be very little secretion in the air-cells or in the bronchial tree. Some diastolic shock was present at the time of

examination when the hand was placed over the dull area above described.

On examination of the ABDOMEN no pulsation could be detected in the aorta or in the femoral arteries, although the circulation in the lower extremities was good. According to Osler, this physical sign of a large thoracic aneurysm is very dependable, and he explains the absence of the pulse in the lower aorta and its branches as caused by the aneurysmal sac being large enough to act as reservoir, annihilating the ventricular systole and converting the intermittent into a continuous stream.

Taking all of these symptoms together a diagnosis of aneurysm was made, and the patient sent to the x-ray room to obtain further details. Both an x-ray and a fluoroscopic examination were made and showed an enormous sacculated aneurysm of the entire ascending part of the aortic arch; in fact, the swelling occupied practically nearly all of the right side of the chest, and was probably the largest aneurysm ever seen at this clinic, where thousands of pictures are taken every year. The heart itself was not enlarged, but was pushed away down and towards the left by the great increase in space required by the aneurysm. How the man could live with such a condition of the artery and survive the strain of severe coughing, in addition to which he stood for hours during the day cooking and lifting heavy cooking pots, is a mystery to everyone who has seen him. With the history of alcoholism covering a period of years, and the absence of syphilis, there is little doubt that a circumscribed loss of resisting power in the media and the adventitia has occurred; this may have been increased by a laceration of the media just above the sinuses of Valsalva and along the convex border of the ascending part of the arch. It is in just such a situation that aneurysm frequently develops, and particularly the sacculated form when laceration occurs in the course of an arterio-sclerosis before compensating thickening has taken place.

In considering what might be done to relieve him, wiring was of course out of the question entirely because of the size of the aneurysm and its form. The iodid of potassium has failed so often to give even the most transient help in these cases that I did not waste any time in prescribing the drug for him, but turned to our materia medica for assistance, hopeless as the outlook was and is now. As we knew the

burden in aneurysm falls chiefly upon the arterial coats, and particularly upon the elastic fibres in these coats, it seemed rational to study up some drug which might possibly retard the process, or at least strengthen the general tonicity of these fibres. In doing this the thought of calcium fluorid came promptly to the front. Fluorid of calcium is found in the surface of bones and in the enamel of teeth. It is also a constituent of the elastic fibres; these fibres are found in the skin, in the connective tissues and in the vascular walls. According to Schüssler, a disturbance of the molecules of calcium fluorid causes a continuous dilatation or a chronically relaxed condition of the fibres implicated, and the arteries affected dilate either over a limited or an extensive area. When the elastic fibres of bloodvessels suffer a disturbance of this character, the internal administration of calcium fluorid should remedy the deficiency of calcium and restore the elastic power, or at least lessen the tendency to relax. Calcium has been shown to play such an important role in the human body that this idea is not at all unreasonable. In any event, the fluorid could do no harm to the patient and it was worth the trial. Accordingly, he was given a tablet of the 6th x trituration three times daily. In a few days the severe paroxysms of cough began to lessen in frequency, both during the day and night—for his sleep had been very much disturbed by the cough for many nights before he came to Baltimore. The oppression in breathing gradually lifted, his desire to sit constantly in a chair slowly disappeared, and his spirits became less depressed; in fact, he told me that he felt more like himself than for a long time. He moves about without any appreciable effort or discomfort, although never in a hurried way. The aneurysmal cough at this date has almost entirely been relieved.

One more case may be mentioned to confirm these conclusions just given.

Harry B., aged 27 years, hostler, had contracted a very heavy cold in the throat and chest while working about his stable, and at this time, when coughing frequently and with great violence, he began carrying large bags of oats into the stable. He was conscious of having strained himself in doing this and his ill-health dated from that day.

On examination, some weeks after that, he walked into my office

very slowly, breathing harshly, coughing with a peculiar brassy, croupy timbre; looking greatly distressed, emaciated and worried. Inspection of his anterior chest showed very distinct pulsation all over the upper part of the sternum and well to the right side of it; in addition, there was a pronounced bulging in this area; expansile pulsation and diastolic shock to the applied hand; decided thrill and tracheal tug, well marked. Auscultation revealed harsh, rough respiration, as though air were passing by an obstruction—the result of course of compression of the trachea, etc. He had oppression in breathing on the least exertion or attempt to pick up anything. Hoarseness, painful effort to speak and inability to do even the slightest work. He had spent considerable time resting in a hospital, but without any benefit. Fluoroscopy showed that he had not only an extensive aneurysm of the ascending part, but of the transverse and descending portion of the arch of the aorta; even the part adjoining the arch was also involved. He was given calcium fluorid in the same way as above directed, and he was sent to the mountains to rest. He came back wonderfully improved and was able to take a clerical position; he had gained greatly in weight and his general nutrition was excellent. He topped off his improvement by doing a very foolish thing considering his condition—he got married!

It would be difficult to surpass these two cases either for their dangerous nature or their far advancement in disease; both so hopeless in their prospective termination and yet capable of being not only relieved of their most distressing symptoms, but actually improved to such an extent as to make their existence more than tolerable. While the primary object in bringing these notes on calcium fluorid before the members of this Society is to ask them to give this remedy a trial in suitable cases, the far greater lesson which these patients teach us is that the x-ray should be used as a routine part of the examination of every case in which the circulation is involved, for in this way many unsuspected instances of aneurysm may be detected in the early stage and measures taken to at least retard progress of such disastrous lesions. If calcium fluorid will do such work in advanced cases is it not reasonable to hope that in the early commencing ones greater results may be obtained? The necessity of observation of the cases mentioned in this paper up to the last moment prevented any notes being sent to the discussors of the paper; many apologies to them.

DISCUSSION.

GEORGE W. McDOWELL, New York: I recall as a student in college Dr. T. F. Allen employed fluorid of calcium with reported success in aneurysm.

BYRON G. CLARK, New York: I have two cases of aneurysm of the aorta very much improved by treatment. I believe that the remedy *lilium triginum* 30 might be of interest and benefit to his patient.

C. LESLIE RUMSEY, Baltimore, Md.: This is an interesting paper by Dr. Shearer. I would like to report a case which came for refractive error with flickering and sparks before the eyes. Dr. Baetjer took an x-ray picture to find aneurysm of the aorta. Wassermann was positive. The eye showed no specific trouble. The patient was given iodides by his physician. The flickerings and sparks were entirely relieved by calcium fluorid, and, incidentally, the aneurysm was more relieved by calcium fluorid than potassium iodid.

RALPH I. LLOYD, N. Y.: Speaking of x-ray examination in respect to aneurysms, it is a very good thing to examine these cases with a screen, and if the aneurysm is properly located you can see some wonderful things. If it is located in the aorta, below the bifurcation of the trachea, you can easily see the bolus of food impregnated with bismuth jump over the aneurysm before it goes through the diaphragm. There is one point impressed on me and that is we need not always expect an aneurysm to have a pulsation which is visible to the examining eye with a screen.

THE PRESIDENT: I regret very much having missed this paper, but I was called into council of President's Address Committee. I regret very much my absence.

W. T. RODGERS, Trenton, N. J.: In regard to discussion of this paper on aneurysm I would like to state that recently of six cases of aneurysm which I had diagnosed, and for which I had prescribed such remedies as the chlorid of calcium, I gave it in potencies from the third to the sixth, and in other cases I had used potassium iodid. I would like to say further, upon examination of aneurysm I found a general condition that involved the arterial coats through the body, that were more or less affected by same conditions that affected the eye, in which two patients gave me 20/60 vision with the right eye and 20/80

with the left. I also found the hearing distance very much shortened. I gave potassium iodid commencing with about first potency, and gave it three times a day for three days, then twice a day, then once a day, then omitting a week should I find that the condition improved generally. This was the method applied in the three that I used the potassium iodid. With the calcium chlorid I found some benefit the first two weeks, and after that the condition gradually improved and the patients felt so much better that they discontinued their visits to my office. I would have been better pleased had I heard from the gentleman who read the paper whether he had made an x-ray examination of the patient after the first one; whether the size of the aneurysm had materially decreased. In my own patient I made some study of the case, but did not make an x-ray, and I found that the breathing was much improved and conditions generally were more favorable. This clinical information alone was not as satisfactory to me as an x-ray examination would have been. I found error of vision and corrected it with glasses.

Dr. John Hutchinson, New York, in a private communication, sends an interesting proving of **morphin sulphate**, with the following particular symptoms,—*Eyes*, unnatural look, staring, glistening, pupils contracted or dilated, either with sore throat, that is, the eyes may express very well the changed mental and emotional condition. *Ears*,—left throbs painfully, better heat, seems to hear circulation all over the body (verified by repeated provings). *Nose*,—sneezing in paroxysms, worse cold air, coryza, takes cold when well clad (several provers). *Mouth*,—loss of taste, dry mouth, dry lips, thirst. *Throat*,—persistently dry, congested, bright color, pharyngitis, spasmodic cough, swallowing painful, better hot drinks, worse solids. *Respiratory*,—marked hoarseness, laryngitis, swallowing painful. The cough of morphin sulphate is spasmodic, teasing and exhausting; the expectoration sounds loose and abundant, but is thin, and it may be scanty.

These provings cover a period of a dozen years. They have been made at different times with selected provers, and all are the results from the 30th potency.

D. M.

NEW SUGGESTIONS IN THE TREATMENT OF ATROPHIC RHINITIS AND PYORRHEA ALVEOLARIS.*

DOUGLAS MACFARLAN, M. D.,

Philadelphia, Pa.

FOR some time I have been extremely interested in a hitherto little known and a seldom used salt of mercury, K_2HgI_4 , the double iodid of the red mercuric iodid and potassium iodid. It first came to my attention when I was running a series of germicidal tests as to the relative value of antiseptics. The surprising fact came to light that this new salt, for it is a distinct entity, was germicidal in solutions greatly more dilute than any of the other well known antiseptics. Typhoid germs were destroyed in dilutions of one to eighty thousand. and strains of staphylococci and streptococci also were killed by dilutions in this neighborhood. White, of New York, made a similar set of provings and found the germicidal powers even stronger: Coplin and McFarland each individually reiterated this remarkable fact in germicidal experiments.

Donald Macfarlan was the first, I believe, to note another remarkable and valuable feature of this salt, that is, its stability in the presence of albumen. This fact was also found by Dr. White, working independently about the same time. Naturally this peculiarity gives it a distinction from the other metallic-salt-antiseptics which precipitate albumens, and by so doing diminish or entirely lose their germicidal power. In the case of the formation of an albuminous coat about bacteria, the penetration of the lethal solution is greatly hindered.

Still another surprising fact was discovered on closer study of this salt—its low toxicity to the human being, a contra-distinction to the well known poisonous effects of the other antiseptics. I ran a series of cases in which I gave the 1 per cent. solution in increasing drop doses, and found a gastric toleration up to mass doses of six or eight drops. Above this point emesis was produced, but no constitutional

*Read at the meeting of the O., O. and L. Soc., Asbury Park, N. J., June, 1919.

symptoms developed. Two old syphilitic cases were picked and the maximum tolerated dose was given three times a day over a period of four months in one instance, six months in the other. In neither case did ptyalism develop and an excellent therapeutic effect was exhibited in one of these cases that had active erosion of the alar cartilages. No undesirable features were noted. The remedy was taken internally in drop doses of the 1 per cent. solution.

From this point and with this ground-work, which gave a confidence in the remedy, I began feeling my way towards clinical fields where it could be put to a good use. Two features guided—the antiseptic power and the irritant quality of the drug—the latter not noticed in the very dilute yet strongly germicidal solution, showed up in the neighborhood of the $\frac{1}{2}$ and 1 per cent. strengths. These indications of the remedy fitted exactly into the symptom-complex of two conditions notoriously recognized as stubborn, atrophic rhinitis and pyorrhea alveolaris.

ATROPHIC RHINITIS.—The symptoms in this disease are briefly recognized as a purulent, fetid catarrh of the nasal passages and of the accessory nasal sinuses. Accompanying this is a gradual destruction of the nasal mucosa, the disappearance of the normal nasal secretion, loss of sense of smell from destruction of nerve-endings in the mucous membranes, and evident absorptive changes in the bony and cartilaginous tissues in the region. A vicious cycle is produced as the disease develops, for with shrinking of tissues goes the enlargement of the nasal respiratory space. A great volume of air passes back and forth through the tract, and the mucosa, already poorly functioning, falls sadly short of moistening and warming the air before it passes on to the throat and lungs. Further than this, dust particles are no longer arrested as the disease is making a drier and dryer nose. The pus infection collects in huge dry crusts that adhere tenaciously within the nose. Here they remain and decay, emitting that frightfully fetid odor that is so well known. Fortunately the victim's sense of smell is gone—and as we approach the poor unfortunate we regret that ours is not gone also. Seriously, this one symptom is in every respect a calamity for the one who has the disease, and his family and friends begin to shun him, and the loathsome odor turns every back towards him.

To these conditions this remedy has come like a godsend, bringing results far better than the older treatments with formaldehyde or permanganate. The strong germicidal factor fits the infection, and the stimulating or irritating quality reawakens the sluggish, diseased mucosa. Following any one of a great number of these cases one finds that with each spraying or swabbing of the nose comes an outpouring of thin nasal secretion from those glands not yet totally destroyed. The crusts are thus softened down and separated off, coming away in huge casts, hard and tough. In the subsequent days, following continuous treatment, the tendency is for fewer and fewer crusts to form, until they are absent altogether. The nose becomes fresher, that is, a more normal secretion develops, either from the over-secretion of those live secreting cells not destroyed or from a true rejuvenation of the membrane. The patient is much more comfortable, for the dryness and the crusting are gone. Needless to say, the members of the household are more comfortable, as with the disappearance of the decaying crusts the fetor goes. More remarkable perhaps than the clearing up of the condition in a few weeks' time is the reappearance of the sense of smell. This I have verified so repeatedly, even with the long-standing cases, that I doubt the accuracy of those nose and throat men of a generation ago who asserted that there was no hope for a return of olfaction.

As to the permanence of results, one has necessarily to consider that a tissue of such delicacy and so exposed as the nasal mucosa, once having suffered from a condition as destructive as an atrophic catarrh can never have the vitality to be expected from a normal mucosa. From time to time, then, recurrences of initial symptoms of the disease are exhibited—a heavy mucopurulent discharge, or dryness and crusting, or again slight fetor—but these are easily controlled by resuming treatment.

These results that I have found so repeatedly strike me as all the more remarkable when one considers how insistent were the old notions that the disease was permanent.

PYORRHEA.—Pyorrhea is a condition that has so much in common with the foregoing disease (atrophic rhinitis) that I was not surprised to see it respond in practically the same good manner to this remedy. Here, too, is a purulent infection with atrophic and absorptive changes

in mucosa, alveolar tissue, and in bone. The gums recede, the alveolar margin shrinks, and large pus pockets appear in the root sockets. All these are analogous symptoms to those met in atrophic rhinitis. Here, too, the double iodid solution works wonders, and its value has been repeatedly confirmed. As a preliminary measure the tartar is scraped carefully off the teeth, care being taken to clean as far down the roots as possible. This is usually not difficult, as the recession of the gums gives room to get well down. Better still is to turn this work over to a thorough dentist, who, with his burs and pumice, can make a clean job. This stage of the treatment is the only annoyance of the patient, for the gums and exposed dentine are still sensitive. But it is absolutely essential to the complete, rapid healing and union which follows later with the use of this remedy. Once the teeth are clean of their tartar and vicious, impossible stumps are removed, the double iodid solution in $\frac{1}{2}$ to 1 per cent. strength is used. Sometimes I precede this with injections of weak peroxide, later washed away with saline. These I use with a long hypodermic to get down in the tooth sockets, putting the needle between the tooth and gums. The bulk of pus and cell detritus is thus removed and the exposed surfaces are ready for the specific treatment. Double iodid is now used by swab or by hypodermic injections, getting down to the tooth-sockets as with the peroxid. Results are rapid and remarkable. The infection is immediately eliminated, sensitivity is diminished, the patient can again begin to eat with comfort, the bleeding of the gums subsides, and the teeth begin to get firm. The latter seems remarkable in its rapidity and is probably explained by Cryer's observation on the rapid fixation of loose teeth by a firm growth of the fibrous areolar tissue. The gums are stimulated and change from the sluggish "proud flesh" type of tissue to a healthy normal tissue, which again unites with the cleaned teeth surfaces. The principle of the stimulating antiseptic gives the cure, as it does in the case of emetin or formaldehyde, but in this case I have had better and quicker results with the double iodid. This I ascribe not so much to the relative strength of solutions as to inherent values in the remedies. Neither emetin nor formaldehyd are as germicidal as the double iodid—in fact, emetin, except in strong solutions, is little more than amebicidal. I have reached a point of improvement in cases with emetin, but have had to finish off with the

double iodid to get complete cure. The toxicity of emetin and formaldehyde is much greater apparently than the double iodid.

I do not hesitate to state again, as with the atrophic rhinitis cases, the use of this remedy gives surprising results. One case I can recall with satisfaction was that of Captain H. in a Field Signal Battalion during the Argonne drive. Captain H. was an important man in his position as radio expert in charge of all stations in the area. I found him in a rather miserable condition with bleeding gums, loose teeth and a mouth so sensitive that he could chew no food. He had been living for a week or two on bread or hard tack soaked in water. He was getting quite run down and unfit for duty, but he had to keep plugging on, and there was no possibility for his relief. No dentists were at hand, for at that time we were in rather active affairs and were with troops in the line. He had told me that his pyorrhea had bothered him for years, that he never could get relief, and that this attack was his worst. I cleaned off the tartar from his teeth as best I could with a bone curette from a pocket case. The curette was rather large, and really more adaptable to reaming out a gun than to getting down into a pus pocket. However, it did some good, and I followed it with a syringing of hypochlorite solution as a means of washing up. The double iodid was then applied as a swab, working it well down around the teeth and between them. A few tabs of gum that had grown into raw, projecting pieces of proud flesh I snipped away with scissors and stopped off with a touch of silver nitrate. His condition improved immediately and in a week's time, with daily treatment, his teeth were firm, his sensitiveness gone, the gums adhering and no pus showing. He began eating solids and soon was practically normal. After the armistice he moved out with the army of occupation, but I saw him about a month later; he was in good shape with no recurrence.

I feel that if the remedy could do this under the conditions that had to be met, it deserves commendation. Other cases I could as readily recall where excellent results were had in the worst sort of pyorrheas. Within the last twenty-one months abroad, whenever I was in rear areas, there was every chance to prove its value, for the French people of every age and class have the most disgusting dental conditions. It is not extravagant to say that among those past

TREATMENT OF ATROPHIC RHINITIS.

fifty years it is exceptional *not* to find a pyorrhea. In saying this I am well aware of the arguments concerning pyorrhea and gingivitis. In these cases, where I could get stumps extracted, the cleaning and the double iodid gave the cure.

Here again, as with atrophic rhinitis, we find relapses, and more especially frequent are the pyorrhea relapses where there is no care taken of the teeth.

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DISCUSSION.

W. R. NOYES, Brattleboro, Vt.: I have used the germicidal disks in otorrhea with good results dissolved in alcohol, 50 per cent., making strength of solution about 1 to 100.

In answer to a number of general questions Dr. Macfarlan replied: This remedy, the double iodid of mercury and potassium, is recommended in purulent sinus cases and also in pyorrhea as a mouth wash. Patients will show a difference in irritability, just as with formaldehyde. When using it in the nose for sinus cases I often start it with 0.5 per

cent. solution. If they stand this easily I gradually increase the strength, stopping when irritation and rhinorrhea become annoying. I aim to produce some irritation and rhinorrhea. It acts like a charm in atrophic catarrh in 0.5 per cent. to 1 per cent. strengths. In an old atrophic catarrh where nasal sensibility is diminished stronger solutions can be used, and as the nose "freshens" the strength is decreased. The solution is very stable if made up in the formula:

1 gram of red iodid.

2 grams K I.

100 c.c of water.

I use in pyorrhea 0.5 per cent. to 1 per cent. and inject into the pus sacs.

MEMBER: Have you used it in otitis media?

DR. MACFARLAN: I have not put it in the ear but I have had a number of friends who have used it in aural conditions, otitis media and persistent purulent post-operative cases. They report good results. It counteracts that proud flesh condition that you see in the chronic suppurative conditions.

Referring again to frontal sinusitis, I will mention one case typical of many. This man had recurring morning attacks, which would last over a week. I saw him one morning when he had intolerable frontal pain. I sprayed his nose with the double iodid solution and started up a profuse rhinorrhea. The nose ran freely for three hours, and with the discharge came a relief of symptoms. The next day I repeated the treatment, but did not see him subsequently for a week. He then said that the condition had cleared up after the second treatment and he did not think it worth while returning.

I use the solution either as a spray or by application. If used as a spray a little sodium bicarbonate should be added to prevent the corrosion of the metal parts.

MEMBER: Is this remedy on the market?

DR. MACFARLAN: This is the very same product as Davis and Geck's Kalmerid Tablets.

The salt is very unstable if sufficient K I is not in the formula.

PRESIDENT: I am sure this has been a very interesting report, manifested by the members present all making efforts to take notes. This will close the session for to-day.

"UNSCRAMBLING THE ARMY," OR "HOW GOOD
SOLDIERS ARE MADE INTO GOOD
CITIZENS."*

CAPTAIN BURTON HASELTINE,

Hospital No. 28, Fort Sheridan, Illinois.

I BELONG to a different medical service from Captain Hetrick. For his benefit I would say that we have in the Army one "job" that is the worst of all, and that is the job of K. P. K..P. means Kitchen Police. His business is to scrub floors, peel the potatoes, stay in the back room and prepare food. He is never allowed to go up front. After the entertainment he still stays behind. I belong to a branch of the service which may properly be called the Medical Kitchen Police. We were kept in the back room, scrubbed floors and prepared food, we never got up in sight of the real show, and now that the show is over we are doing the best we can to clean up the remnants. The job is given to the K. P. usually because he is good for nothing else. We don't admit that in our case. We think we are kept there because we scrub floors and peel potatoes better than others! The results of preparatory work have been shown largely by the splendid work of those who were at the Big Show, and we feel that there is sufficient credit and glory even to reflect a little on us in the back room. My particular duty to-day is to speak of the K. P. work of the returned boys from abroad. No other Army has ever had the attention that this has. We had fewer to take care of in proportion to number, with less sickness and casualties, consequently we had a larger number of recoveries. The medical profession went into the army in larger numbers than any other occupation. We had the advantage of learning from our Allies what they had to teach. Many Americans were in service with the Allies. Last of all we had the largest amount of money of all the countries, made possible by fewer numbers and the well known generosity of the American people. Three things have come out of this war. First, medically and surgically, the

*Stenographic report of remarks made by the author coincident with his lantern slide demonstration.

Carrel-Dakin treatment made possible the preservation of limbs that previously would have been lost. The instructions were to preserve every piece of tissue possible. By the continuous application of the Carrel-Dakin treatment this was subsequently saved. A large amount of reconstruction surgical work is being done here in all lines, and this is the second problem. Many of these limbs after being restored in a gross way were not supplied with nerves and hence nerve repair is being done on a much larger scale than ever before. Third, is the vocational training of the soldier. This is a very large part of the work at Fort Sheridan, which is the largest army hospital, the newest one and in every way the best equipped. The three things being done there are orthopedic correction in a gross way, peripheral nerve surgery, and re-education of the soldier. I will illustrate this by a few stereopticon pictures.

This is the little institution that existed at Fort Sheridan when the Government decided to enlarge. Colonel Theodore Proxmire was placed in charge of this. It was his business under trying conditions to convert this into a large hospital to receive three thousand patients. This is a portion of what was originally the old barracks building. This building already existed and was converted into a hospital with 1,200 beds. This looks somewhat like the stock yards, but it is part of the present Fort Sheridan hospital. Next you see the institution in a sunny day in winter. That is Colonel Proxmire. The work he has done, although he is one of the kitchen police, compares favorably with that of anyone in the service. This is an apparatus in the orthopedic department for the development of motion in the forearm and hand, and this is an improvised apparatus showing what our fellows do in a hurry. We have better equipment now. That is another one by Captain Reich, of Cleveland. One good thing has come out of Cleveland, and perhaps we may hope for more. He also built this thing out of bicycle pedals for getting foot and leg motion. This shows the way they began to interest the boys in photography. Major Fred. Reagle, of Montclair, N. J., chief of the educational department, is getting the boys interested in farming. There are over thirty occupations to be taught at Fort Sheridan, varying from basket-weaving to building an automobile. This is a little amusement, being the first automobile built under the direction of the

"UNSCRAMBLING THE ARMY."

Educational Department. This is the Physio-therapy Department. Major Reagle selects exceedingly good-looking people for his aides as you can see by this picture. After receiving treatment at the hands of these very attractive aides, it requires a moving picture to show how well the patients feel. This is another portion of the Educational Department. The boys are making signs advertising their department. Here they are examining grains. Farmers in the vicinity of Fort Sheridan are using these men as farm laborers and paying them good salaries. This is Colonel W. N. Bispham, our present commanding officer. He formerly had charge of the training camps at Riley and Oglethorpe. We feel fortunate in having in command a man of his remarkable ability. It is his desire that no patient shall be discharged from the Sheridan Hospital who has not a job waiting for him with pay at least equal to his earnings before the war. So far we have been able to live up to that. I thank you.

ABSTRACTS.

Examination of 2,449 School Children showed that 1,113 had enlarged cervical glands; 1,167 had varying degrees of tonsillar hypertrophy; 296 had nasal obstruction from hypertrophied turbinates, injury or adenoids; 133 had vision below 20/40. There were eleven cases of pulmonary tuberculosis, and 64 suspects; 172 had bronchitis; 6 had pleurisy.—W. B. Howes, *Boston Med. and Surg. Jour.*, Oct. 2, 1919.

D. M.

The Pharmacology of the Local Anesthetics.—Acute intoxication in man from the use of local anesthetics is far more common than indicated by the number of cases recorded. Nine local anesthetics were studied and their maximum toxicity proven upon cats by intravenous injection. Group 1,—alypin, apothetin, beta-eucain, nirvanin, procain, novocain, stovain and tropacocain are rapidly eliminated, so that several times the minimum lethal dosal can be injected over periods of one or two hours without causing death.

Group 2 includes cocain and holocain, slow of elimination, causing death in smaller total doses than members of Group 1.

The elimination of the local anesthetics is by the liver, where they produce a profusion of blood. The drugs can be recovered in quantities from the liver.

Death comes by simultaneous paralysis of the heart and respiratory center.

The employment of artificial respiration and the intravenous injection of epinephrin enabled these observers to resuscitate the majority of the animals. Cardiac massage was frequently added.

The relative toxicity of these drugs is represented by a chart which may be translated by the following table in which the lower numbers represent the weaker toxicity: Procain, 3; Nirvanin, 4; Stovain, 5; Tropocain, 6; Apothetin, 6; Cocain, 8; Beta-Eucain, 10.5; Aypin and Holocain, 12.—C. Eggleston and R. A. Thatcher, *J. A. M. A.*, Oct. 25, 1919.

D. M.

Parallel Between Intubation and Tracheotomy.—Martínez cites authorities from the first century of our era who described diphtheria, but then and for long after it was regarded as a purely local affection. The first to describe it completely as a general intoxication from a local affection were Spanish writers of the sixteenth century. No symptom has been added since to their complete description "*De morbis puerorum*." Tracheotomy is as old as diphtheria itself, even Hippocrates referring to both. Martínez continues, "Intubation was suggested in antiquity, and Bouchut, of Paris, in 1858, presented a tube for the purpose, but it was criticized so severely that intubation was not adopted until O'Dwyer, of North America, took it up—the fate of many initiatives in the Latin races, their initiative coming to flower and fruition in other countries which get the credit for the whole." Sota, of Seville, was the first to use the new method in Europe. All became enthusiastic over it when diphtheria antitoxin was discovered, but even now Martínez prefers tracheotomy when the child cannot be kept under constant surveillance with skilled hands to replace the tube if it is coughed out. He always goes prepared for both intubation and tracheotomy. In three cases he found co-existent thymitis which rendered intubation impossible. In one case a retropharyngeal abscess had the same effect, and in some others edema of the larynx. The edema of the larynx in one case had closed the opening of the tube in the throat and grasped the tube so firmly that the tube could not be removed. The emergency tracheotomy and artificial respiration resuscitated the apparently moribund infant. The tube was thus in the larynx and the cannula in the tracheotomy opening for four days, but no harm resulted. Tracheotomy is indicated further when there is excessive production of tough membranes, and when there is pre-existing subglottic laryngitis or bronchitis. In one case with pneumonia, forty hours after the tracheotomy the child had apparently fatal suffocation, but Martínez dilated the trachea and with forceps he extracted plugs of mucosa. Then he introduced into the trachea and bronchi a lubricated soft rubber tube, drawing it up and down, and thus extracting large quantities of mucus, starting up the respiration anew, and the moribund child was brought back to life. He has applied this technic in a number of other cases, and reported in 1900 his success with this sweeping out

ABSTRACTS.

the tracheobronchial passages. He deems this useful for combating accumulation of mucus, and paralysis of the bronchi, and for inciting to cough and respiratory movements, whether there is diphtheria present or not. In nine cases the tracheotomy was done in extremis. Even when the opening had been made, no air entered the lungs as the thorax was in a paralyzed condition, but he pounded twice on the abdomen, inserted the cannula, and started artificial respiration, with stimulating injections of caffein, camphorated oil and ether, and in a few minutes the child was resuscitated.—Martínez Vargas, *Revista Espanola de Medicina y Cirugía, Barcelona*, July, 1919, 2, No. 13. Abstr. J. A. M. A., Oct. 18, 1919.

D. M.

At a Meeting of the Section of Materia Medica of the Homœopathic County Society of Philadelphia, W. Franklin Baker showed experiment animals that had developed pneumonia after the feed of Bryonia in tincture, two drops on bread every two hours. Beautiful right-sided lesions were developed, both of lung and kidney; there was a congestion of muscular tissues.

D. M.

Journal of Ophthalmology Otology and Laryngology

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No. 3

Editorial

GOVERNMENTAL RED TAPE AND OUR JOURNAL.

UNITED STATES POST OFFICE, First Class.
Lancaster, Pennsylvania.

March 9, 1920.

Editor, JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY
AND LARYNGOLOGY,
Care Examiner,
Lancaster, Pa.

Sir: Enclosed find form 3501 which we will ask you to complete (page 2) together with letter received by this office from the Third Assistant Postmaster General, Division of Classification. After the return to this office of the above mentioned form, and the submission of the necessary data required, the evidence submitted will be forwarded to the Division of Classification for their decision.

Very truly,

LOUIS N. SPENCER, P. M.

By E. S. WHITSON,

Supt. of Mails.

Division of Classification

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January 21, 1920.

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Lancaster, Pennsylvania.

Receipt is acknowledged of your letter of the 15th instant trans-

EDITORIAL.

mitting an application for admission of the JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY to the second class of mail matter at your office under the Act of March 3, 1879, and a letter from the editor.

It appears from the application and from the evidence that no issue of the publication has been published since its suspension in 1917. Inform the publisher that no definite decision in the case can be made until after publication of the first issue since suspension of issuance, and that when such issue is published prompt consideration will be given a statement on the inclosed form showing the number of copies of such issue printed and the disposition in detail of all the copies. If any copies are on hand at the time the statement is made, it should show also what disposition will be made of such copies.

It is noted that the Editor states that 200 copies of the publication will be sent to that number of members of the Ophthalmology, Otology and Laryngology Society and paid for by that society, the publisher, presumably out of membership dues.

In connection with that statement advise the publisher that the above-mentioned Act requires a "legitimate list of subscribers" and prohibits the entry thereunder of publications "designed primarily for free circulation" and that, for a member of a society to whom a publication is sent in connection with the payment of membership dues to be included in the required "legitimate list of subscribers," he must express a desire for the publication and in making remittance of dues must indicate that he sends a specified sum which is for a subscription to the publication for a definite period, it being immaterial whether the amount of the subscription forms a separate remittance or is included in a remittance of dues, provided the price paid be above what is construed to be nominal when compared with the advertised subscription price. If the applications, orders and bills cover both dues and subscriptions, they must show the specific amount for subscription, and the period of the subscription.

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"I hereby apply for membership in the Ophthalmology, Otology and Laryngology Society and inclose herewith \$. as annual mem-

EDITORIAL.

bership dues \$....., of which is for a year's subscription to the JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY," and, if receipts are given for dues,

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In the forms as prepared the amount of the annual membership dues should be inserted and the part thereof paid as a year's subscription to the JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY. The latter must be fifty per cent. or more of the regular advertised annual subscription price of the publication.

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A copy of this letter is inclosed for delivery to the publisher, who should be requested to submit with the above mentioned evidence a copy of the constitution and by-laws of the Ophthalmology, Otology and Laryngology Society.

THIRD ASSISTANT POSTMASTER GENERAL.

THE NEED FOR CRITICS.

IT may be recalled by those fortunate enough to have been able to attend Professor Salzmann's lectures on histology of the eye that he was constantly pestered by his students asking him to write

a book on his particular branch. His reply was uniformly the same, and usually quite abrupt. In effect it was that he was kept busy enough criticising the work of others. He was the critic *par excellence*, an honest critic if ever one existed. He found plenty to do in pointing out falsities wherever they existed in the work of other histologists—famous ones at that.

The so-called scientific world needs such men as Salzmänn to prevent the rest of us from running off at tangents. Unfortunately men like Salzmänn are only too few. It is so much easier for most of us to travel with the crowd, and appropriate to ourselves, whenever the occasion permits, the little glory that comes from endorsing the claims of the well-recognized bigger fellows, even though that glory be of short duration.

There is a certain class of individuals in the medical profession, as well as in other fields of endeavor, who manifest a desire to bring attention to themselves in one way or another that is not altogether commendable. As a rule, they are sufficiently above the average in intelligence, and sufficiently glib of tongue, to fool for awhile the average fellow who is on the constant lookout for the "sure-thing." If it were not for the harm that is done the critic would not be needed. Not all of them carry the same line of goods. One has the habit of inventing new instruments or improving old models, more often the latter. At every society meeting he exhibits a new instrument designed to replace an old model, and nine times out of ten it is not so good, a proof of which is to be found in our instrument cases.

Another of them is constantly presenting new methods of operative procedure, or modifications of well-recognized methods. For instance, Smith will attempt to modify an operation originated by Brown, which is already satisfactory, in order that it may thereafter be known as the Brown-Smith operation. The constant recurrence of such actions on the part of Smith would suggest a design on his part to draw attention to himself. Quite a few men of this class have busied themselves in trying to make simple problems difficult, while the true scientist is constantly endeavoring to make difficult problems simple.

Another fellow busies himself writing a book. Without any attempt at originality he compiles, from the already too many text-

books, that which he needs for his purpose, and by emasculating sentences that may have been clear enough in the original he tends to confuse the readers who are compelled to flounder through it, some of whom feel that the author must certainly have been a brilliant man to have prepared that which a more intelligent student would classify as rubbish.

Another fellow attempts to foist on the profession some sure cure in the form of a special treatment—internal, external, mechanical, or otherwise, that has served him successfully in 80 or 90 per cent. of his cases. In some few instances they are misguided individuals who jump at conclusions and go off half-cocked. Some of these are of a designing nature, as illustrated in the case of Smith, cited above.

These fellows could not exist if it were not for the fact, as previously mentioned, that they are above the average intelligence, and so glib of tongue that they attract at first, then later befuddle the mind of the less enlightened. This latter and much larger class, through their eagerness for short cuts to success, often follow the former with disappointing results; disappointing not alone to them but to the patients who happen to come under their care.

It is for the above reasons that critics are needed to purge the medical profession of this class of skillful fakirs. Until this has been accomplished there is little need for us as a profession to point the finger of scorn at the fakes outside.

G. W. M.

TO THE MEMBERS OF THE HOMŒOPATHIC O., O. AND L. SOCIETY.

THE next meeting of the Society will be held at Cleveland, O., in June. This beautiful city on Lake Erie affords opportunity for many lake trips and the meeting will be profitable in many ways.

This letter is a personal appeal to every member to take some part in our annual program. If you have been doing some original work or have become particularly interested in some phase of our specialities or have some interesting case to report, then we wish you to notify the Bureau Chairman and the Secretary accordingly.

EDITORIAL.

WRITE IMMEDIATELY.

Papers should be in the hands of the Bureau Chairmen not later than April first. In addition, we wish a short synopsis of your paper for publication in the new O., O. and L. Journal, edited by Dr. George W. Mackenzie. This must be sent in promptly, not later than April first, or the abstract can not be published.

NEW MEMBERS are still desired. We wish each man to send in at least one signed application blank. Last year's record *must be bettered* this year. The success of the new journal demands this activity.

THIS IS YOUR SOCIETY. GET BUSY.

The Secretary has several copies of the transactions of the O., O. and L. Society for the years 1900-1912. He will be pleased to mail them to any one for the cost of sending.

PAPERS AND NEW MEMBERS WANTED.

BUREAU CHAIRMEN.

Dr. Ira O. Denman, Medical Economics, 425 Ohio Bldg., Toledo, Ohio.

Dr. S. B. Moon, Eye, 804 Westinghouse Bldg., Pittsburgh, Pa.

Dr. L. E. Hetrick, Ear, 30 West 48th St., New York, N. Y.

Dr. J. R. McCleary, Nose and Throat, Mercantile Lib. Bldg., Cincinnati, Ohio.

Very sincerely,

NEIL BENTLEY, *Sec'y.*

DR. L. E. HETRICK: *Report of the tentative program for the Ear Section of the O., O. and L. Society, June, 1920.*

Dr. Philip Rice, The Curability of Catarrhal Deafness.

Dr. Dean W. Myers, An Unusual Case of Sinus Thrombosis.

Dr. W. J. Blackburn, Closure of Permanent Opening of Membrana Tympani.

Dr. Douglas Macfarlan, Aneurismal Bruit in the Ear Case.

Dr. H. P. Bellows, Kali Bichromia in Aural Practice.

The following have not sent titles:

Dr. W. G. Shemeley.

Dr. George W. Mackenzie.

Dr. H. W. Champlin.

Dr. G. J. Alexander.

Dr. W. F. Beggs.

Dr. James A. Campbell.

LOCAL ANÆSTHETICS IN NOSE AND THROAT SURGERY.*

W. J. BLACKBURN, M. D.,

Dayton, Ohio.

LOCAL anæsthetics play a much more important part in present day surgery than they did a few years ago. Their field is not limited to nose and throat operations, but takes in the entire body. The most important major operations are frequently done under local anæsthesia. There is a reason for this. We are beginning to see more and more the dangers of general anæsthesia, both at the time the operation is being performed and also in the post-operative results. The old expression, "The operation was successful, but the patient died," many times is explained by the fact that the anæsthetic, either directly or indirectly, was largely if not altogether to blame.

I want to take opportunity to say, here and now, that nowhere in the field of medicine do we need doctors with more skill and sound judgment, who know what to do and when to do it, and do it promptly, than in the field of general anæsthesia. I deplore the fact that the General Assemblies of some of our states have passed bills delegating to nurses the right to administer anæsthetics. They may become skilled in this art, but no nurse, unless she has had a thorough course in physiology, pathology, chemistry, anatomy, and pharmacology, in addition to her regular course in nursing, should be permitted to administer an anæsthetic. I believe that every General Assembly that has legalized the giving of anæsthetics by persons other than physicians has lowered the standard of medical education. It is surprising also to note how many of our prominent surgeons are in favor of nurses giving anæsthetics. However, when we look "behind the scenes," we will find in the majority of instances that this same surgeon desires the legalizing of nurses for anæsthetic purposes to promote his own selfish interests. Some of these surgeons have private hospitals; they hire a nurse at so much per month, she gives the anæsthetic, the patient is

*Read at the meeting of the O., O. and L. Soc., Asbury Park, N. J., June, 1919.

charged a regular anæsthetic fee, and thus the nurse is a source of profit to this same surgeon. The encroachment of the nursing profession upon the medical profession is becoming more marked each year, and according to the present trend of things within the next decade or two the trained nurse will be performing abdominal operations, attending labor cases, and perhaps specializing in diseases of men, women and children. I mean no disrespect to the trained nurse in the foregoing remarks. She is a valuable adjunct to the medical profession, and one that cannot well be dispensed with. I believe in giving her all that she deserves, and my whole-hearted support, so long as she knows and keeps her place.

My use of local anæsthetics in nose and throat surgery is limited to three: cocain, novocain, apothecin. A few years ago cocain was the chief remedy used, and it still holds first place among a great many operators. In nasal work, especially submucous operations, turbinectomies and sinus work, cocain "mud" is my favorite up to the present time. In these operations I employ it by using the pure cocain flakes, first dipping the cotton-covered applicator in one to one thousand adrenalin solution, then into the flakes, and applying it directly to the mucous membrane of the nose. I have used this method for approximately five years without any toxic effect. I have had physicians say to me, "Aren't you afraid to use cocain in that manner?" To all of whom I have replied, "Positively, no." I have never felt uneasy in using cocain in this way. The action of the adrenalin upon the peripheral bloodvessels prevents the deep absorption of the cocain. We get complete anæsthesia without toxicity. I have talked with a number of physicians who have used this method for a number of years, and they all tell the same story. I believe a four, six, or eight per cent. solution of cocain applied to the mucous membrane in the manner mentioned would produce in many cases toxic symptoms. I usually make about three or four applications as many minutes apart, in nasal operations, and seldom have I had to make further application of the anæsthetic before the operation was completed. My use of cocain in nose and throat surgery has been limited to the nose in the last two years. Up until two years ago I employed what is known as the Mayo Formula for tonsil operations; namely,

R. 1/10 of 1 per cent. Cocain Solution, 5 drams.

LOCAL ANÆSTHETICS IN NOSE AND THROAT SURGERY.

Adrenalin Chlorid, 1-1000 Solution, 5 minims.

M.

Inject in and around the tonsils, using all of the above prescription for each case, one-half for each tonsil.

I found his formula worked very well, but a fatal case about two and one-half years ago in which the above formula was used caused me to discontinue cocain altogether in tonsil work.

There were no complications in this case so far as the operation itself was concerned. But the symptoms pointed to cocain poisoning from a non-toxic dose, there not being used in the case more than a total of one-sixth grain.

A post-mortem by a competent pathologist failed to reveal the cause of death. In my opinion it was a case of the patient being hypersensitive to the drug. I shall be very glad to know, in the discussion, if anyone else has had a similar experience.

We are usually anxious to report our successful cases, but many hesitate to report the failures. The cases which have not been satisfactory are often more helpful to us than the successful ones; *i. e.*, we are more apt to learn from our failures. It makes us think.

Since that time I have discontinued the use of cocain in tonsil operations. I may have been unduly alarmed, but, at any rate, after thinking over the symptoms in this case I came to the conclusion that many of them were similar to cocain poisoning.

I was able shortly after this to procure some novocain, which had been very hard to get until that time, and I began the use of this drug. A short time afterwards my attention was called to apothecin for local anæsthesia. As novocain was still rather difficult to get I decided to try apothecin. It was claimed for this drug that it was non-toxic, not habit-forming, that its anæsthetic properties were equal to novocain or cocain, and that it was not subject to the Harrison law. According to the manufacturers it is hydro-chlorid of gamma-diethylamino-propyl cinnamate. In other words it is made with propyl alcohol, and cinnamic acid. Novocain is made with ethyl alcohol and benzoic acid. Apothecin is readily soluble in alcohol or water. The aqueous solution is neutral to litmus. The best results are obtained by the use of freshly prepared solutions. Apothecin is put up in powder or tablet form. I prefer to use the tablets because it is easier to prepare a solution of

definite percentage. The tablets are also put up in combination with adrenalin, and this is a very convenient form, and is the one which I use most frequently. The adrenalin prevents hemorrhage and also the absorption of the drug far from the point of entrance. I usually prepare four drams of a 1 per cent. solution for a double tonsillectomy, using one-half the amount for each side. My experience with apothesisin has been limited in throat surgery to about fifty tonsillectomies. I have had no desire so far to go back to novocain. The anæsthesia seems to be as complete as with either cocain or novocain. Hemorrhage has been negligible both at the time of operation and afterward. I have read the reports of a number of physicians who have been using apothesisin, not only in nose and throat surgery, but also in general surgery, and I find that they are fully satisfied with the results. I have not attempted to use it up to this time in nasal surgery, but think I shall in the near future. The cases upon which I have used it have ranged in age from seventeen years to sixty-four years.

I believe in apothesisin we have found a local anæsthetic of much value, one that we can depend upon, one that is free from toxic symptoms even when used in greater strength than recommended by the manufacturer; also an anæsthetic that is reasonable in price, not subject to the Harrison Law, and that produces satisfactory anæsthesia.

No doubt most of the members present have used this anæsthetic, and I shall be very glad indeed to know if their experience coincides with mine.

DISCUSSION.

A. B. CLAPP, Muscatine, Ia.: The selection and use of anæsthetics seems to be oscillatory in that we find at one time a tendency to the use of general anæsthesia in a certain sort of cases, and then when a new product for local deadening of pain is placed on the market we expect a voluminous report on the new arrival of rare promise.

In any operation, be it what it may, that requires general anæsthesia, I feel that we should insist upon the administrator being one as well qualified in this important service as is the operator.

The essayist has spoken of the cocain-mud, which I believe is in general use, but to me the only safe method is ironing the tissues, so to speak, and never packing any portion of the nose with the concentrated mixture.

Since the advent of apothesis I have discarded both cocain and the foreign-enemy product, novocain, when injection methods are called for, as in tonsillectomy, and the good results obtained will continue its selection until a more worthy successor presents itself.

A MEMBER: I would ask Dr. Blackburn if he had any other reason for discontinuing his use of novocain. I have had no trouble during the war in getting novocain, in getting it from Meltz, of New York, a limited amount at a time, I have had excellent results with it. I would also ask if he has had any other systemic disturbance from it that condemns it in any other way?

CHARLES H. HUBBARD, Chester, Pa.: In the use of apothesis in intranasal surgery my experience has hardly followed out those who have preceded me, in that I have not gotten the same degree of anæsthesia that I would have from cocain. Hence, since operating on a number of cases under apothesis, with not altogether satisfactory results, I have first used cocain, then without pushing that drug, used apothesis, when I have gotten very good results, much better than when using apothesis alone.

HENRY W. CILAMPLIN, Towanda, Pa.: With reference to different anæsthetics used, for some years I used Alpha Beta eucain in throat work with excellent results. The doctor has told us of a method of using cocain which is very practical and economical, that is, pure crystals. I use the same wherever practicable for local applications; it is safer and surer, and usually sterile, which a solution may not be after it has been made some little time.

DANIEL W. MILLER, Blackwell, Okla.: I have recently begun the use of procain in tonsillectomies, after the method of Dr. Arthur E. Smith, of Chicago. There is one advantage which I see in the use of this method—that you inject the tissues beyond the field of what might be infection; that is, you block the nerves posteriorly beyond the area of operation; and in the two cases in which I have used it the results have been very satisfactory. We have no pain or hemorrhages. We use the adrenalin in from 1/1200 to 1/1600 solution; in combination with the procain solution. There is one thing about the procain; it is a synthetic preparation and is made in this country, and you do not have to comply with the Harrison Law to get it as you do with other drugs. I did not know this until after I took

up this method of anæsthesia, the technic of which had been worked out by Dr. Smith, and I would like to know whether any of the physicians present have been using this method of anæsthesia in their throat work. It is also applicable to nasal work, but I have not gotten the technic of it for all my nasal work. It does, however, do very nicely in throat work.

WILLIAM J. BLACKBURN, Dayton, O.: Somebody asked why I made a change from novocain to apothésin. No special reason, except I could not get the novocain. I think I will use novocain again, but will also continue to use apothésin. It is put out under the name of procain by two or three different firms. A doctor spoke of using apothésin in nasal surgery. I have not used it at all in nasal surgery. I am glad to hear Dr. Miller bring up the nerve-blocking anæsthesia. I was going to ask whether anybody had used that method. If he has I would be glad to hear from him because there is a dentist in our city who has been up to Cleveland recently taking a course under Dr. Smith, and he is very much carried away with this method of nerve-blocking with novocain. He said he saw some very beautiful tonsil work under this method of anæsthesia, and I am anxious to know more about it. I think I should have gone to Cleveland had I known about the course, but I did not know about it until it was over.

To Each Individual Member of the O., O. and L. Society.—Don't fail to attend the O., O. and L. Society meeting at Cleveland in June,—and send title of paper you intend to read to Bureau Chairman immediately, or to the Secretary, Dr. Neil Bentley, 1161 David Whitney Bldg., Detroit, Michigan. The program will be better than ever; also the same will be true of other attractions.

Don't fail to pay up your dues to the Society promptly, and specify that \$3.00 of the dues is for subscription to the JOURNAL OF O., O. AND L. The postal authorities demand it. Read the correspondence in the editorial pages concerning Governmental Red Tape, and then vote for a physician for President of the United States—General Leonard Wood.

THE CARE OF THE EYES OF THE ADULT.*

HENRY L. GOWENS, JR., M. D.,

Philadelphia, Pa.

THE adult period here includes that part of life from twenty-one to forty years of age, or until the beginning of the presbyopic stage, which stage may occur earlier in some individuals than in others; in other words, from the end of the period of adolescence to the beginning of the presbyopic stage of life.

This period is considered by itself for the reason that the individual, in most instances, must see to his own health and take the initiative or else the advice of his physician to see an oculist.

We shall pass over the earlier periods of life, which I have already covered in four previous papers.

In the United States Census Report for 1910 we find that 33 persons are blind out of every 100,000 of the total population between the ages of twenty and thirty-nine years. Of the 60,000 blind in the United States, 15,000 are between the above ages. For every blind person we generally can count from one to three who are what is termed near-blind, and a still greater number with markedly deficient vision; and so we may continue to estimate until we come to what seems an almost universal lack of eye-perfection. It is for this reason, viz., the lack of perfect eye-condition, that I am bringing before you for consideration this, the most active period of human life.

We shall better understand, after tabulation of the lists, by the number of young men between the ages of twenty-one and thirty-two years who were refused entrance to the army because of deficient vision—so deficient that glasses failed to bring it up enough in order that the draftee could be acceptable for even limited service—that there is a growing need for the education of the masses who are in this period of life. This can best be accomplished by educating the general practitioner.

Higher standards in the teaching of ophthalmology in the medical

*Read at the meeting of the O., O. and L. Soc., Asbury Park, N. J., June, 1919.

schools of this country are constantly being urged by those interested in this sphere of work; and if this idea is carried out as proposed, ten years from now there will be a vast improvement in the attitude of the public toward these matters.

There are many instances where men and women have been forced to abandon their choice of life-work because of neglect of their eye condition. Just as the thermometer is necessary for the accurate knowledge of a febrile condition, just so a thorough examination of the ocular state is necessary to eliminate reflex conditions and those aggravated by ocular errors. The over-worked, the under-fed, the convalescent and the debilitated may be given a lift if their faulty ocular condition is remedied so far as it is possible to do so.

Just as it is necessary for school children to be examined by a medical inspector, so I feel that every individual between these ages (21 and 39), if they have not been examined prior to this period, should have their ocular state ascertained in order that errors, where they exist, may be properly corrected, as was done in the case of army draftees.

Industrial organizations in some states and in certain types of employment generally require a casual examination of the vision, but the *true condition* should also be known.

Most of the industrial accidents to the eyes occur during this period. This gives an added reason for preventing accidents on account of poor vision. Protective glasses should be worn by all individuals engaged in certain types of industrial work, and these should be further protected anteriorly, laterally, inferiorly and superiorly by a fine wire gauze to further insure the eyes against accidents.

Malignant and benign growths occurring in other parts of the body, as well as other general diseases, may affect the eyes and its adjacent structures during this period; it is well, therefore, to be on our guard against them. Early tendency toward the development of cataract may also occur during this period. Refractive errors when corrected lessen this tendency. Refraction, therefore, is a stitch in time, for it will save or prolong the usefulness of the eye.

The writer is not looking for the millennial dawn concerning the care of the eyes but is hoping for a more thorough care of them during this period of life. The eyes deserve a care comparable with

THE CARE OF THE EYES OF THE ADULT.

that taken in the case of a major operation in any other part of the body. The object desired should be the reduction to a minimum of every preventable pathologic condition, physical or social or otherwise, including among them eye conditions.

DISCUSSION.

WILLIAM M. MUNCY, Providence, R. I.: Dr. Gowens' paper dwells upon that period of life when man is using the greatest amount of energy and producing to his highest capacity. That this efficiency should continue as long as possible it is necessary to check the deterioration in the points most liable to be first affected, of which the eyes frequently stand paramount in importance.

That a responsive interest may be awakened in the individual, is there a point of contact like, for instance, the public schools in childhood?

This spring the secretary of the Optical Manufacturers' Association approached me in conjunction with Dr. Hamilton, one of our prominent opticians, to see if a quick and somewhat comprehensive examination of the eyes of the working men and women of the country was practical. Their object was entirely commercial, in that they wished to find the percentage of individuals not wearing glasses who would be benefited by so doing, and those who really were in absolute need of the same. They wished thus to obtain a rough estimate of the future growth of the business; also to see if the knowledge obtained by the individual, without any urging by us, would produce further results among the defective,

We devised the following card, and adapted a uniform method of examination:

NAME	AGE
----------------	---------------

ADDRESS

OCCUPATION

SYMPTOMS	{	HEADACHE	{	FRONTAL
		DIZZY		OCCIPITAL
		INFLAMED		EYES
				LIDS

H. L. GOWENS.

	O. D.	O. S.
Vision	15/	15/
Hyperopic		
Myopic		Astigmatic
Presbyopic		
Opacities	{ Cornea	
	{ Lens	
Muscles	{ Exophoria	
	{ Esophoria	
	{ Hyperphoria	
Previously worn glasses		

After the subject read the lowest line he could readily see on a Snellen chart placed at 15 ft., a plus .50 lens was placed before the eye and the result noted. Then a minus .50 cylinder at axis 180, in front of the first lens, and the result compared with the same in the opposite meridian. In some cases a minus .75 sphere and cylinder were used if conclusions had not already been drawn. By making checks on the card, and if an assistant or nurse had the cases ready as rapidly as could be handled, it was found to take on the average of 4 minutes per case to obtain a rather comprehensive idea of the status of the vision.

A cross section of two large plants of diverse occupation and character of workmen, to wit., the Stevens Optical Co. and the Universal Winding Co., were examined. All the help were not tested; only those not wearing glasses, taken in a cross section through the plant.

SUMMARY OF EXAMINATION IN TWO PLANTS.

Stevens & Co., Inc.—Universal Winding Company.

1. Number examined who did not wear glasses 416.

40 years and over	29
35 years to 39 years	35
30 years to 34 years	48
25 years to 29 years	51
20 years to 24 years	121
15 years to 19 years	132
—	416

2. Number needing glasses 159

Percentage of those examined, 38.22%.

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3. Number with slight defect in vision but who do not need glasses at present 74
Percentage of those examined, 17.79%.
4. Number with normal vision 183
Percentage of those examined, 43.99%.

The need of glasses was based on the history. All cases with less than 15/30 vision were listed as defective, and also cases with history of frequent headaches where an astigmatic glass was acceptable, even if the vision was previously 15/15. The slightly defectives were those of 15/15 and 15/20 without objective or subjective symptoms, who would accept corrections of $\frac{1}{2}$ degree plus lens.

Frequent headaches was the complaint of 79; 18 were dizzy; 19 had inflamed eyelids and conjunctiva; 1 amblyopia and convergent squint. Also one eye lost from injury. One was found with corneal opacities.

Hypermetropic cases	142 or 34.37%.
Myopic cases	28 or 6.73%.
Astigmatic cases	139 or 33.41%.
Presbyopic cases	15 or 3.60%.

It was noted that 65 or 15.62% had previously worn glasses.

Those having a vision of 15/15 were 254 or 61.05%.

Those having a vision of 15/20 were 99 or 23.79%.

Those having a vision of 15/30 were 28 or 6.73%.

Those having a vision of 15/40 were 15 or 3.60%.

Those having a vision of 15/70 were 7 or 1.68%.

Those having a vision of 15/100 were 10 or 2.40%.

Those having a vision of 15/200 were 3 or .72%.

It was noted that a large number having normal vision gave a history of headaches and would accept a glass correction. Many of these had previously worn glasses. In other words, visual acuity is not a reliable test as to the absolute need of corrective lenses. It was also noted that by far the larger number of defectives were among the unskilled labor. To what extent is the class of labor dependent upon the amount of visual defect, even if it be but slight? I feel that the eye is a very important factor in a majority of cases.

There is also an advantage to any shop in having a record of

the visual acuity of its help in case of later accidents and the claim of defects resulting from the same.

This was but a slight laboratory test, and whether anything practical results from it waits to be seen. The Optical Association is interested, but it has decided that it is too large a proposition for them to handle without co-operation. There is a commercial side in the interest of the various optical manufacturers, also the advantage to any factory or place of business in increasing the working efficiency of its help. It is after all a question of moral responsibility that the community holds to its individual members, and the burden rests upon the employer, the health department and the physician to devise some plan. Any up-to-date plant should be only too glad to have the eyes of its employes examined. The public health service is interested. We as physicians should be ready, if not to form a means of uniting all the parties concerned in such a universal examination, at least to do our part on the scientific side and see to it that such a method is used that will produce the greatest amount of good to all concerned.

W. R. NOYES, Brattleboro, Vt.: I did not understand Dr. Muncy to say whether he examined the muscles or not. If he did not, I think he left out a very important part. I think the testing of the muscles is fully as important at times as the refraction.

WM. M. MUNCY: The object of the examination was to obtain a quick and somewhat accurate estimate of the need of glasses. There was no case where a history of frequent headaches was obtained that would accept a glass, that was passed as a normal eye. If I had it to do over again I should add a cover muscle-test, as outlined by Dr. Suffa, as it would have taken only a minute longer to have ascertained the muscle-balance. The object of the Optical Association was to find if it would be advantageous for them to go to the expense of having an examination made throughout the country. Therefore, they wanted something that would give them a fair idea of the needs of those not wearing glasses.

H. D. SCHENCK, Brooklyn, N. Y.: The real crux in this paper appears to me to be aimed at the prevention of defective vision that affects industrial efficiency. It seems to me that this can only be brought about when better medical inspection and follow-up work is done in the schools than has been the case in American cities up to

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the present time. About the same percentage of eye-defects found in children was, according to my experience, found in the young men who were examined for military and naval service. Thorough and careful examination of the eyes of children in the schools twice a year would bring to the parents, after a time, appreciation of the fact that it means a great deal, and it would be very much easier for the nurse to convince the doubting parent of the necessity for an examination of the eyes and the correction of whatever defects are found.

New York brags about having the best school inspection in the country. If this be the case the others are pretty poor, because in New York examinations are not only made infrequently, but are carelessly done in almost all the schools. I see child after child in my office who declare they have never had the test made with Snellen's type. To my surprise, I found this to exist in some of the best known, best graded and the most up-to-date and carefully run of the private schools.

If much progress is going to be made in the next generation in having fewer defective eyes, we should make some effort to reach the authorities in most of our public and private schools, and insist on a careful examination of the eyes. Simply finding and reporting the defects is of little account unless efficient follow-up work by a good type of nurse is undertaken. There is over 75 per cent. loss in work done without a nurse or without proper follow-up work at the home.

The better class of the community are realizing the necessity of preventive medicine more and more, and if they can be persuaded that the correction of defective eyes in childhood and early adult life is not only going to add to the efficiency of the individual, but also prevent troubles later in life, these things will be attended to. A large decrease in the number of eye defects may be looked for in the next ten years if these things are hammered into the authorities having charge of the education of our school children.

HENRY L. GOWENS, JR.: I listened with interest to Dr. Muncy's discussion, and I feel that, as he has told us in the paper, it would be a very good idea for large industrial works to know the conditions. But, as he has said, just an ordinary preliminary examination would tell us very little. So it narrows down to the point that we must hope for the greatest benefit to be derived from our own work and from

the work which is directed to us by the physicians—that is to say, as soon as the great need of this work is brought to the attention of the practicing physician; the need—not in a commercial way but in a health way—of increasing the resources of patients and enabling them to have a proper eye examination. This would prevent many from being dependent upon their relatives and prevent others from being dependent upon the public. It was not my thought in writing the paper to convey the idea that I simply meant for people to be glassed, but that the eyes should be examined routinely, not only for the improvement of vision if they need glasses, but for the true health of the eye. We know that in little children we sometimes have the formation of a glioma, and that it is mature and almost in the anterior chamber before the parents recognize it. If the child had his eyes passed upon as an ordinary routine at the request of the obstetrician, the condition would probably be discovered at its inception. There are very few cases on record where these patients live after operation. They generally have a life of one or two years. So it is only for the health condition of the eye that I wish to bring this before the attention of this body, in order that those who have to do with teaching institutions, those who have to do with a good number of physicians, and those who have to do with industrial plants will do all they can to have the general public take as much care of their eyes as of their lungs. If they thought their lungs were affected the first thing they would think of would be to go to a doctor, and I think they should take the same care of their eyes. It is only for this reason that I called it to the attention of the Section.

AMERICAN MEDICAL EDITORS' ASSOCIATION.

THE fifty-first annual meeting of the American Medical Editors' Association will be held at the Grunewald Hotel, New Orleans, La., on Monday and Tuesday, April 26th and 27th (during the week of the A. M. A. convention), under the presidency of Dr. Seale Harris, editor of the *Southern Medical Journal*.

A most interesting program has been arranged and every doctor, even remotely interested in medical journalism, will find it to his advantage to attend.

It is advisable for you to make early reservation of rooms to assure you of accommodations.

FACULTY TECHNIQUE IN TONSIL DISSECTION.*

W. F. ROTH, M. D.,

Wilkes-Barre, Pa.

THE subject of this paper presupposes a criticism of methods; this is not my intention, for without doubt there are operators who do beautiful work with all the methods to date. The fact remains that in a large number of cases in which tonsils are condemned to complete removal, remnants and stumps are left. For this I believe the technique is more at fault than lack of ability on the part of the operator.

You will agree with me that for the purpose of dissection, tonsilotomes, punches and other similar instruments should be eliminated; that scissors should be of minor importance and that knives should not be used in the sinus.

The usual method of dissection is to tilt the tonsil, make an incision at the border of the plica, and after more or less backward separation remove it with the snare. However, I find many tonsils, particularly those of adults with extensive adhesions, often broken down and cystic, the removal of which is extremely difficult.

In these cases the line which should be of least resistance becomes the line of greatest resistance, and frequently I have had literally to pry the tonsil from the sinus. At times the adhesions are so fibrous they will break a heavy snare wire as fast as it can be replaced. Under these conditions the possibility of entering the tonsil from the front is ever present, with the danger of it becoming an incomplete dissection. Therefore I am using another method that covers this class of tonsils as well as the simpler forms, by which one is able to remove, un-mutilated, all kinds of tonsils without changing one's technique during the operation. It can be done quickly, and is safer, as it is a forward dissection and not backward in the dark.

A word as to the preparation and position of the patient.

As a general rule, most operators seem to prefer a local anæ-

*Read at the meeting of the O., O. and L. Soc., Asbury Park, N. J., June, 1919.

thetic, partly on account of the advantage of operating in an upright or sitting position—and this position is used, in Boston, for patients under general anæsthesia. I decided to try it and have never had reason to regret my decision. Bleeding does not cause trouble, as the blood is promptly swallowed if not mopped out by the operator, and does not enter the larynx.

About an hour before the operation we give the patient a hypo containing one-eighth of morphin combined with hyoscin 1-200 and cactoid 1-128, repeated shortly before operating if ether is to be the anæsthetic and the patient is an adult. It requires less ether and gives more sustained anæsthesia, thus allowing ample time for work.

If local anæsthesia is to be used, I prefer one per cent. novocain injections and do not swab the throat with cocain, as it is unnecessary and makes the patient very uncomfortable by causing dryness and constant irritation. Under this anæsthesia it is possible to operate safely patients who have frightful heart lesions.

For ether anæsthesia we use an ordinary invalid's reclining chair, the patient being in a recumbent position until etherized and ready for operation. The legs are then strapped below the knees, a heavy bandage passed under the arms, patient brought to an upright position and the bandage fastened behind the chair. A nurse holds the head during the operation.

After adjusting the mouth gag, with tongue depressor in one hand and a Pierce knife in the other, make a small incision at the lower angle between the anterior pillar and the tonsil, as this is the only location which is almost never involved in adhesions; also, the cut is not directly against the tonsil, as is often the case if the opening is made at the top of the sinus, with the possibility of cutting through, getting lost in the tonsil and having the upper pole slip completely out of sight and not return to view until a week or so later when the sinus flattens out. Then you wonder how you missed it.

I use a Pierce knife, because being disk-shape and at right angles to the handle it acts exceedingly well as a pillar retractor when making the incision. Next pass a Hurd dissector through this opening directly to the back of the tonsil and rapidly separate it from the sinus, working upward and forward toward the mouth. It is almost impossible to break into the tonsil from the back and you will have little trouble

until its anterior attachment is reached; if this does not give way with gentle traction, a half-curved, dull-pointed knife is passed behind and its attachment severed. At this point, if necessary, have an assistant hold the tongue-depressor and pick up the tonsil with the seizing forceps. As it has been partly loosened from its base there is little danger of tearing a section away when gentle traction is used. Now use a Hurd spoon, which with its perfect shape and broad bearing surface will usually peel the velar lobe from the posterior pillar like an orange from its skin, and seldom injures the network of veins located here. Should trouble be encountered at its anterior attachment, a dull-pointed right- or left-angled knife passed behind will make a perfect separation. The tonsil is now half dissected, and by passing your snare well down behind it you will safely enclose the lower pole and not miss the other remnant, so often left behind. For unless sufficient preliminary dissection is made this is apt to be the case.

The steps given represent the maximum. A step can be omitted or advanced as the requirements demand. That is, if you are stopped by the tissue not giving away, make the next move and the operation will go forward.

Personally, I have found this method to be simple, safe and effective. You are working in a closed cavity and what force is used is directed against the capsule of the tonsil and not against the sinus wall. You are working forward and cannot get lost. Its anterior attachment is the last severed, thus serving to support the tonsil during the dissection; when finished you have the entire tonsil and only the tonsil, unmutilated, and without injury to the pillars or the sinus.

The operation can be done rapidly and often one tonsil removed before further etherization is required. Should there be bleeding, hold a tampon in the sinus, release the mouth gag and proceed to etherize for the second tonsil; when the patient is ready you will find the bleeding has stopped.

This technique applies equally well for stumps and pieces of tonsil, in the re-dissections that are becoming quite numerous.

For bleeding, tampons slightly moistened and dipped in dry tannic acid, applied to the sinus and repeated a few times, are effective. The contact of the blood with the dry tannic acid makes the solution and is not so readily washed away as other astringents. It bleaches the sinus

white, discloses the bleeding point and allows you to pick up the offending vessel and crush it.

I do not allow a bleeding patient to be removed until the bleeding has practically ceased, as there is plenty of time while the patient is recovering from the anæsthetic to apply the tampon. If necessary, pack the sinus and allow it to remain for twenty-four hours.

A simple method is to use a needle built like a shepherd's crook, pass one or two sutures from behind through the posterior and anterior pillars, loosen the sutures, place the pack within the sinus, then tie.

AFTER TREATMENT.—A cleansing solution, and in connection with this I use a solution of milk of magnesia to lessen the acidity in the mouth, as it is often the cause of excessive soreness.

A word as to tannic acid. It will corrode your instruments, and if used before the operation is finished it is advisable to sponge the mouth with a wet tampon before proceeding.

For the removal of tonsils in children, the mechanical means have been so perfected that it is simply a matter of choice as to the instrument used. Personally I prefer Sauer's modification of the Sluder guillotine, because with it I am able to remove all kinds of tonsils, buried, as well as the more prominent ones, without being compelled to change my technique during the operation.

The Sluder has great leverage, and having a blade which is neither sharp nor dull, starts to dissect at once, cuts true, giving a clean almost polished tonsil without damage to the sinus or pillars. The only objection I find is the more or less free bleeding, which, however, I have been able to control with tannic acid.

In using the Sluder two points are important. First, be sure you have the lower pole of the tonsil in the instrument. Second, do not remove the instrument until you have finger-dissected it from the posterior pillar or you may strip away a piece of the palatine arch.

The so-called bloodless instruments require a more careful selection of cases, and are uncertain in buried tonsils unless a preliminary partial dissection is made. The blade being dull they do not dissect readily, and are apt to crowd so much tissue ahead that it buckles and the separation is often made ahead of the base.

In conclusion I feel this paper would not be complete without a fair justification of the method. Therefore it seems essential to state

FACULTY TECHNIQUE IN TONSIL DISSECTION.

that these deductions are made from over a thousand cases successfully operated and without a death or secondary hemorrhage.

DISCUSSION.

HOWARD IVINS, Trenton, N. J.: Dr. Roth has presented us with a very able paper and described his technique thoroughly. I believe his use of H. M. C. preliminary to etherization a good thing. Also, his elimination of tonsillotomes, punches, etc., from the operation. He has found the dissection of broken down and adherent tonsils very difficult and I know we all have. It is certainly easy to get into the tonsil itself when trying to push back the anterior pillar and separate the tonsil from its bed, and we occasionally leave a piece of the tonsil, even when we think we have enucleated the entire tonsil. I have had the same experience as the doctor with wire breaking, and very annoying it is. His control of hemorrhage is good. I have never used the tannic acid, relying on cold sponges and adrenalin. In one case, a bleeder, I used horse serum with good results. I have never had to suture, but believe his method of suturing very practical. I have used glycothymolin and listerine as mouth washes in adults; but seldom use anything in children as they resist, and I think the struggling offsets the benefit derived. The milk of magnesia should be helpful. I have had no experience with the Sluder instrument. The doctor's series of over a thousand cases without a death or secondary hemorrhage speaks well for his method and skill.

GEORGE J. ALEXANDER, Philadelphia, Pa.: After having tried out a number of methods for controlling hemorrhage, including packing the fossa and sewing together the tonsillar pillars, I am convinced against the latter because of several associated undesirable features: First, because it is too complicated; second, if there occurs a post-operative hemorrhage, a hematoma, or a clot forms under the pillars, the sutures must be removed to clean out the cavity; and third, and most important, because of injury to the pillars. My experience has been that many of the stitches slough out leaving a crippled, scarred pillar, where by other methods, such as pressure, tampon, or catching the bleeding point with a hemostat you will have a nice, clean, normal pillar, anterior and posterior—that is, providing you have not injured the edges or outer surface of the pillars in your dissection.

The method I have found to be the simplest in those cases that bleed profusely, and have a tendency to continue, is to catch the bleeding vessel with a curved clip. That is a clean, simple, uncomplicated method to stop profuse hemorrhage. If you apply the curved clip to the bleeding vessel or vessels of the first tonsil, by the time you have the other tonsil removed the clip can be removed. Secondly, if it should be the last tonsil of the two you have removed that is bleeding, you can apply the clip and send the patient from the operating room, and remove it in ten or fifteen minutes without any discomfort to the patient; the flow of blood having been stopped without any inconvenience whatever because the patient has not yet reacted from the anæsthetic and does not feel any discomfort from the presence of the clip.

W. F. ROTH: I have seldom found it necessary to sew the pillars after the tonsils were removed and have had little trouble with bleeding that I could not control with dry tannic acid.

In the case of two children who had been allowed to leave the operating room without much attention to the bleeding, I was called back later and found them almost bloodless and as white as marble. After that I made it my business to see that the bleeding had practically ceased before they left the operating room.

I refer to this method of sewing the pillars because it is practical and quick. The stitches should be quite deep.

I recall that in one of my first cases I had a little leak from the descending palatine that persisted the next day. I believe this is the usual source of bleeding that gives trouble.

In these cases I first put in the stitches, loosen them up and place the pack behind and tie. I never have had any trouble from sloughing out of stitches if deeply taken, except in the case of one stitch taken near the angle of the jaw which did not have a very good hold. I remove them in twenty-four hours. I probably have sewed up the pillars in a couple of dozen cases; not more than a half dozen were actually necessary; the others were done at the time of operating to keep my hand in. This is the quickest method I know that is reasonably satisfactory.

The work is difficult and I consider it of most importance to stop

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the hemorrhage quickly. An artery clip is sufficient if you can find the bleeding point and let it remain for a short time.

By the method of operating suggested I do not have much bleeding, and believe that in ninety-nine cases out of one hundred troublesome bleeding is due to injury of the pillars; if you cut them you are apt to have a persistent leak.

THE PRESIDENT: I agree with that absolutely. You are right on that.

W. F. ROTH: In practice there is one instrument that will take care of the dissection in 50 per cent. of the cases, that is the combined Hurd Spoon and Dissector.

Reports on Local Anesthetics in Laryngology.—The Section on Laryngology, Otology and Rhinology, A. M. A., has appointed a special committee to study and report on the "Special advantages of the various local anesthetics in nose and throat work."

The committee is very desirous of learning from members of the profession of any toxic effects, not necessarily fatal, occurring in their practice, and will be greatly pleased to receive communications regarding any ill effects noted by them following the use of any local anesthetics.

All such communications will be regarded as strictly confidential, and may be sent to the chairman of the committee.

EMIL MAYER, M. D., *Chairman*,

40 E. 41st St., New York.

ROSS HALL SKILLERN, M. D., Philadelphia.

ROBERT SONNÉNSCHEIN, M. D., Chicago.

PROCEEDINGS OF THE THIRTY-SECOND ANNUAL
SESSION OF THE AMERICAN O., O. AND L.
SOCIETY, ASBURY PARK, N. J., JUNE
16, 17, 18, 1919, NEW MONTEREY
HOTEL.

(Concluded.)

WEDNESDAY, JUNE 18—MORNING SESSION.

The meeting was called to order by the President, Dr. Ira O. Denman, at 10 a. m.

THE SECRETARY read the paper of Dr. Howard P. Bellows, Boston, Mass., entitled "Five Recent Cases."

Discussion by H. S. Weaver, Jas. A. Campbell, Wm. M. Muncy, Robert G. Reed, and the President.

PRESIDENT: The next number 23, Dr. Wells, is absent, and Dr. Cross will take his place. At the same time Dr. Cross will present the matter under No. 13 on yesterday's program. Following that I am going to call on Dr. Suffa to finish the talk he gave us the other day. He gave us the anatomy and physiology of the muscles, and led up to the point where he is to tell us how to train the muscles.

DR. ALBERT E. CROSS then presented the papers, "Clinical Demonstration of Muscle and Fusion Testing," and "The Importance of Pinning Round Lenses in Frame to Avoid Turning," by David W. Wells, Boston, Mass.

Discussion by Wm. M. Muncy, Geo. A. Suffa, Burton Haseltine, and others.

THE PRESIDENT: I want you to know Dr. Chevalier Jackson. Dr. Jackson has been invited into the room to hear a paper that will be interesting in his line, and for that reason we will ask Dr. Stitzel to give way while Dr. Alexander reads a paper on "Submucous Resection in Young Children."

The paper was then read by Dr. Alexander.

Discussion by Chevalier Jackson and Harold A. Foster.

DR. RALPH LLOYD read a paper entitled "The Fields in Amblyopia Exanopsia."

PROCEEDINGS OF THE THIRTY-SECOND ANNUAL SESSION.

Discussion by David Wells and C. Leslie Rumsey.

Adjourned.

WEDNESDAY, JUNE 18—AFTERNOON SESSION.

The meeting was called to order at 2:50 p. m. by the President, Dr. Ira O. Denman, in the Ocean Moving Picture Parlor.

THE PRESIDENT introduced Dr. Chevalier Jackson, as follows:

This event is only one which goes to prove the superiority of America. For many years we have had to journey to Europe in order to pursue a superior course of study in various lines. Conditions in the past few years have been rapidly changing, and now for most things the world will turn to America for the highest and best in scientific attainments. This afternoon it is my pleasure to present the most renowned specialist in his line in the world, our own Dr. Chevalier Jackson, of Philadelphia and America. (Prolonged applause.)

(Dr. Jackson's and Dr. Haseltine's addresses.)

The meeting then returned to Hotel Monterey, resuming its session at 4:30.

Dr. George J. Alexander consented not to read his paper entitled "Some Instructive Features Associated With Several Acute Mastoid Operations," because of lack of time, inasmuch as he had read one paper in the morning.

DR. HENRY W. CHAMPLIN, Towanda, Pa., read a paper entitled "Refraction Under Prolonged Fogging Combined With a Minimum of Drug Cycloplegics."

THE SECRETARY, Dr. Neil Bentley, Mich., read Dr. C. Gurnee Fellows' discussion on this paper.

Further discussion by Wm. M. Muncy, J. W. Stitzel, and I. D. Metzger.

The Society then proceeded into business session.

BUSINESS SESSION.

Report of the Secretary, Dr. Neil Bentley, Detroit, Michigan.

On motion duly seconded and carried, the Secretary's Report was accepted as read.

REPORT OF THE TREASURER.

THE TREASURER, Dr. William M. Muncy, Providence, R. I., then presented his report as follows:

PROCEEDINGS OF THE THIRTY-SECOND ANNUAL SESSION.

The rule that for all men in active service the dues should be waived made some difficulties. A slip was sent to the members notifying them of this. A few of the men would not accept the generous action of the Society. Most of them did, which they should.

TREASURER'S REPORT, 1918-1919.

Receipts.

Balance on hand, June, 1918	\$244.39
Received from dues	495.00
Interest on deposit in R. I. Hospital Trust66
	<hr/> \$740.05

Expenditures.

Irene H. Snyder, Stenographer	\$75.00
Dr. C. L. Rumsey, expenses of President	31.50
Dr. I. O. Denman, expenses of Secretary	62.28
Dr. C. L. Rumsey, letter heads	10.50
Goodrich Printing Co., Programs and Envelopes...	31.75
Dr. Wm. M. Muncy, expenses of Treasurer	19.58
University Press, insurance on drug provings	8.25
Edward S. Jones, envelopes and notices	8.75
Edward S. Jones, application blanks	8.70
	<hr/> \$256.31
Balance on hand in R. I. Hospital Trust Co.....	483.74
	<hr/> \$740.05

Assets.

Cash on hand	\$483.74
Dues in arrears and for the year 19/20.....	663.00
	<hr/> \$1,146.74

Liabilities.

Expenses of President, postage and stenographer ..	\$29.90
Expenses of Secretary, Programs, \$41.50; Mem- bership Lists, \$25.00; Letter Heads, \$13.00;	
Postage, stationery, etc., \$61.32	146.82
Expenses of Treasurer	21.27
Bill of official stenographer	100.00

PROCEEDINGS OF THE THIRTY-SECOND ANNUAL SESSION.

Irons & Russell, pins	94.50	
		<hr/> 392.49

Assets over liabilities		\$754.25
No. of members paid	119	
No. of members unpaid	69	
New members paid	20	
New members unpaid	1	
Total membership	209	
No. of deaths	4	
No. of resignations	1	

Members Deceased.

Dr. G. Walter H. Conrad, Philadelphia, Pa., died in service, Oct. 29, 1917.

Dr. Ralph W. Homan, Webster City, Iowa, died Oct. 31, 1918.

Dr. Everett Jones, Boston, Mass.

Dr. Chas. E. Paine, Brooklyn, N. Y.

Member Resigned.

Dr. Joseph Ball, Cleveland, Ohio.

New Members.

Dr. Morrell B. Beals, 525 West End Ave., New York City.

Dr. Frederick J. Cady, 310 N. Thayer St., Ann Arbor, Mich.

Dr. Chas. E. Cole, 218 Truke Bldg., Superior, Wis.

Dr. Frederick Wm. Derby, 168 Huntington Ave., Boston, Mass.

Dr. R. C. Eckardt, 616 Madison Ave., New York City.

Dr. Earl Stephen Hallinger, Haddon Heights, N. J.

Dr. Frank A. Howland, 120 So. Main St., Adrian, Mich.

Dr. Geo. Green Jackson, 14 Hill St., Newark, N. J.

Dr. Fred. L. Johnson, 1113-15 David Whitney Bldg., Detroit, Mich.

Dr. Julius T. Kane, 9 Smith St., Jamaica, N. Y. C.

Dr. Geo. H. Quay, Jr., 818 Rose Bldg., Cleveland, Ohio.

Dr. Willard Thompson, Dixon, Ill.

Dr. Rome M. Webster, 636-66 Reibold Bldg., Dayton, Ohio.

Dr. Roy C. Cooper, 704 Diamond Bank Bldg., Pittsburgh, Pa.

Dr. Marion G. Pitt, West 91st St., N. Y. City.

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Dr. Charles B. Keeler, Darien Rd., New Canaan, Conn.
Dr. Harry Clifton King, 1422 K St. N. W., Washington, D. C.
Dr. Will Otto Bell, 320 Cobb Bldg., Seattle, Washington.
Dr. Wm. T. Rogers, 217 S. Clinton Ave., Trenton, N. J.
Dr. Linnæus E. Marter, 1631 Race St., Phila., Pa.
Dr. John C. Smith, 604 Peoples' Nat. B., Jackson, Mich.

Respectfully submitted,

WM. M. MUNCY.

Members in Service.

Dr. G. Walter H. Conrad, Webster City, Iowa, died in service, Oct.
31, '18.

Dr. Henry Bierman, Bloomsburg, Pa.
Dr. Robert Burke, St. Johnsbury, Vt.
Dr. Jos. F. V. Clay, Philadelphia, Pa.
Dr. Frank A. Clawson, Meadville, Pa. (Hoboken, N. J.)
Dr. M. B. Coffman, Richmond, Va. (France.)
Dr. Carleton A. Harkness, Chicago, Ill. (Fort Riley, Kan.)
Dr. Burton Haseltine, Chicago, Ill. (Capt., Fort Sheridan, Ill.)
Dr. L. C. Hetrick, New York City.
Dr. Wm. J. Hultenschmidt, New York City.
Dr. A. E. Ibershoff, Cleveland, Ohio. (Fort Oglethorpe, Ga.)
Dr. R. M. Jones, New York City. (Capt., Camp Green, N. C.)
Dr. Douglas Macfarlan, Philadelphia, Pa. (France.)
Dr. David L. Martin, Boston, Mass. (Capt., General Hospital,
Carlisle, Pa.)
Dr. Wm. C. McKnight, New York City. (Major, Fort Slocum,
N. Y.)
Dr. Frank B. MacMullen, Detroit, Mich. (Camp Pike, Little
Rock, Ark.)
Dr. Irvin D. Metzger, Pittsburgh, Pa. (Camp Zachary Taylor,
Ky.)
Dr. Edwin Munson, Colchester, Pa. (Camp Wadsworth, S. C.)
Dr. R. C. Reed, Cincinnati, Ohio.
Dr. A. H. Richardson, New York City.
Dr. Frederic G. Ritchie, New York City. (Capt., Camp Upton,
N. Y.)

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Dr. Wm. D. Rowland, Asbury Park, N. J. (Capt., Base Hospital, No. 44, France.)

Dr. Fred. C. Sage, Waterloo, Iowa. (Capt., Camp Sherman, Ohio.)

Dr. Frederick M. Sears, Dorchester, Mass. (U. S. N., Newport, R. I.)

Dr. J. Holbrook Shaw, Plymouth, Mass. (1st Lt., Camp Hospital No. 31, Meudon, France.)

Dr. John J. Smith, San Francisco, Cal.

Dr. Geo. C. Webster, Jr., Chester, Pa. (Embarkation Hospital, Newport News, Va.)

BOARD OF AUDITORS.

PRESIDENT: I will appoint as a Board of Auditors Drs. Suffa and McCleary. Please take charge of the Treasurer's figures and report as soon as you are through.

PRESIDENT: If I may break the rule of order long enough I will call attention to the long list of new members, twenty-one, and repeat that during the past three years we have had only one new member. All these members have been obtained since Christmas.

REPORT OF NECROLOGIST.

Dr. Ella G. Hunt delivered the following report:

In the untimely death of Dr. Everett Jones, of Brookline, April 25th, there passed from active life a highly respected and distinguished physician.

A number of basic elements are essential in the make-up of the really successful physician; mere numbers of patients, or a large bank account, or even an extended reputation are not alone sufficient to stamp a man a success. A man may have any or all of these evidences of success, yet may through a selfish motive or a mercenary spirit stultify his real professional growth and leave his work poorer because of having subtracted from rather than added to. In such cases the accumulations have been to the man and not the profession, and perish with his ashes.

Dr. Jones gave himself to his profession, and in the giving, his profession was the richer for his living. But the generous giving of himself brought his untimely death.

He began life 51 years ago in Corrina, Maine, and graduated from Boston University in 1898. He began practice in Brookline immediately after his graduation, but a few doors from his residence where he died.

Dr. Jones was successful at once in establishing a lucrative general practice, but his desire was to enter the field of special surgery on nose and throat work. He was appointed assistant surgeon to the Massachusetts Homœopathic Hospital in 1900, and had a large clinic both in the out-patient department and the hospital.

Dr. Jones was the first to introduce into Boston the La Force method of bloodless tonsillectomy. He performed the operation first at the Massachusetts Homœopathic Hospital in the presence of an interested audience. It was some time, however, before it was generally adopted by other specialists, but it is a method now quite generally employed.

Dr. Jones was an active member of the O., O. and L. Society, to which he made a number of valuable literary contributions. He had under preparation a paper for the American Institute of Homœopathy to be read at the forthcoming meeting of the body at Asbury Park.

Dr. Jones belonged to the Massachusetts Homœopathic Medical Society, the American Medical Association, the Massachusetts Medical Society, and other similar organizations. He belonged to the Masons in Brookline, and was a member of the Tedesco Country Club in Swampscott. He has a summer home on Rockaway Ave., Clifton, on the North Shore.

In 1900 he married Miss Elizabeth Lowe, daughter of Dr. Lewis G. Lowe, of Brookline. She died in 1908, and four years later he married Miss Janet Hartley, of Brookline. He is survived by his wife, also by a son of the first marriage, and a daughter of the second. He leaves also his venerable father, as well as a sister, Mrs. Merton Raynes, of Melrose, and a brother, Dr. Frederick E. Jones, a Brookline physician.

DE WITT G. WILCOX, M. D.

RALPH W. HOMAN, M. D., 1869-1918, Webster City, Iowa. State University of Iowa, College of Homœopathic Medicine, Iowa City, 1894. Dr. Homan was an alumnus of this college and a former member of the faculty. Died, October 31. Dr. Homan was a member of

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the American Institute of Homœopathy, the O., O. and L. Society, and the Iowa State Society. Specialized in eye, ear, nose and throat work.

Dr. A. B. Clapp will speak further of Dr. Homan to you.

DR. A. B. CLAPP, Muscatine, Iowa: Time being limited I want to say but a few words. We must pause and speak of the departed brothers who have been with us for many years. It is with mingled regret and pleasure that I speak of Dr. Homan and his passing from our midst. Dr. Homan was always prominent in our State Society, past president as he was, a member of the O., O. and L. Society, and attended most of their meetings.

He had an unusually appealing personality, a man of mild temperament, unassuming, a devout church worker, a man in every sense of the word.

I wish to speak especially of his work as regards refraction and muscle work. He was a very acute refractionist and an able scholar in muscle defects, and while he did very little operating, his knowledge of drug action and their application to diseased eye conditions won for him due respect from his associates. We have sustained a loss in our State Society and a similar one in our O., O. and L. Society. I thank you.

Dr. G. Walter H. Conrad, Philadelphia, Pa., who died in service, Oct. 29, 1917.

Dr. Conrad was born in Philadelphia, March 9, 1888. He died of a brain abscess while in the Medical Corps of the Army at Austin, Texas, on October 29, 1917. He was a promising young man, and was associated with Dr. Palen, of the Ear Department of the Hahnemann Hospital of Philadelphia. He was elected to membership in the O., O. and L. Society at the 1917 meeting, at which time he was to have read his candidate's thesis, which has since been published. He was regarded by Dr. Palen and Dr. Clay, with whom he was associated, as having a very bright future in his chosen field, for he was very studious and applied himself very closely.

He entered the Army on the first call for volunteers, and was granted a commission, taking his first training at Fort Benjamin Harrison. He was assigned to the Signal Corps as an examiner of aviators at Austin, Texas, where he developed brain abscess and died. He is especially missed by his associates and confreres in Philadelphia.

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THE PRESIDENT: During my connection with this Society of eleven years I think we have now our first real necrologist. Dr. Hunt's report is along the line of my idea of what such reports should be. We should not be so eager to get through our sessions, or to devote our time to scientific matters, that we are not willing to pause a moment to pay fitting tribute to the memory of our deceased members, and this has been very fully and feelingly done. I think I am violating no secrecy to inform Dr. Hunt now that she has been re-elected Necrologist for the next year.

REPORT OF CENSORS.

DR. WILLIAM J. BLACKBURN, Dayton, O.: I went over the list and as far as I can see I find those who recommended these men are in good standing, and I am sure they would not give their names unless they knew the men to be worthy of election. I move that the men whose names have been read in your hearing be elected.

All 21 candidates were elected.

REPORT OF COMMITTEES

I. ON ELECTION.

DR. WILLIAM R. KING, Washington, D. C.: The ex-Presidents who could be secured met last night and went over the situation and prepared a list of candidates for your consideration:

PRESIDENT: Dr. William McLean, New York City, N. Y.

FIRST VICE-PRESIDENT: Dr. J. A. Ferree, Columbus, O.

SECOND VICE-PRESIDENT: Dr. J. V. F. Clay, Philadelphia, Pa.

SECRETARY: The very efficient incumbent, Dr. Neil Bentley, Detroit, Mich.

TREASURER: Dr. William M. Muncy, Providence, R. I.

NECROLOGIST: Dr. Ella G. Hunt, Cincinnati, O.

FOR CENSORS:

Dr. Irvin D. Metzger, Pittsburgh, Pa.

Dr. J. W. Stitzel, Hollidaysburg, Pa.

Dr. Mary L. Lines, Brooklyn, N. Y.

Dr. D. W. Miller, Blackwell, Okla.

Dr. Frank B. MacMullen, Detroit, Mich.

Submitted by Committee of ex-Presidents, who are: William

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Rufus King, M. D., Washington, D. C., and Captain Burton Haseltine, M. D., Chicago, Ill.

COMMITTEE ON ATTENDANCE.

DR. WILLIAM J. BLACKBURN, Dayton, O.: There were 12 in attendance at the first session on Monday morning; 45 in the afternoon; 48 at the Tuesday forenoon; 56 at the Tuesday afternoon; 45 at the session this morning. This afternoon session I have not been able to get. There have been 66 registrations in the O., O. and L. Society, unless someone has come in this afternoon that I haven't gotten.

COMMITTEE ON PRESS.

THE PRESIDENT: I found we were at a disadvantage in regard to the Committee on Press since no local man belonged to our Society, although arrangements were made through one of the Fraternal Booths to have some attention given us by the press, which has been done.

REPORT OF THE COMMITTEE ON PRESIDENT'S ADDRESS.

This Committee wishes to express its appreciation not merely of the President's address, but for his long service to this Society as its Secretary and President, and for his excellent work in preparing the program of this meeting in the face of war conditions, which limited the time necessary for its preparation.

Especially the Society should appreciate his personal work in securing new members, having at this meeting added twenty-one.

In considering the President's Address, the Committee commends the extremely practical character and the timeliness of the topics discussed.

We agree with our President that there is no more important question before the profession at present than that of the economic relation of the physician to the community. We believe that every medical organization such as ours should more directly concern itself with the consideration of this question.

We recommend that in the future our program should regularly include some timely articles under the direction of a Bureau of Economics.

This Committee has carefully read the portion of the President's address concerning the re-establishment of a Society journal, and feel

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with him that it is a vital factor in the future development of this Society.

After consideration of all possible means by which this recommendation could be carried out we submit the following plan:

First: That beginning January 1st, 1920, the publication of our transactions be discontinued as a part of the *Institute Journal*, and that a separate journal be established as the official organ of this Society, to be issued quarterly under the same name as formerly, namely, THE JOURNAL OF OPHTHALMOLOGY, OTOTOLOGY AND LARYNGOLOGY, that the editorial and business management of this journal be continued under the direction and management of Dr. George W. Mackenzie with such assistants as he may select.

Second: That the annual dues of members of this Society be increased from three to five dollars, which shall include a subscription to the JOURNAL.

Third: That the subscription price to the JOURNAL shall be three dollars per annum.

We suggest to the editor that if it be practicable this address be published in an early issue of the JOURNAL, and that reprints be sent to each member of the Society.

Respectfully submitted,

ALBERT E. CROSS,
BURTON HASELTINE,
DOUGLAS MACFARLAN,

Committee on Presidential Address.

DR. IRVIN D. METZGER, Pittsburgh, Pa.: In regard to the economic feature, it seems to me some means of putting the President's suggestion into effect should be taken. The adoption of that report will do this. Let us get this thing into operation and make it effective.

DR. GEORGE W. McDOWELL, New York, N. Y.: As beginning an economic career I would suggest that as an addition to the President's report such parts as relate to the establishment of a new journal and proposed change in membership fees be added, so that it can get as wide circulation as possible, and interest as many as possible in the new venture and get subscriptions. I think that can be well done in the President's address as being pertinent. This report and the action of the Committee on the Address will be automatically included with

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the address, unless otherwise indicated. The adoption of this report will empower the incoming President to appoint a chairman for it.

(It was moved, seconded and carried that the Report of the Committee on the President's Address be accepted and the recommendation adopted.)

SPECIAL COMMITTEES.

There were no Special Committee Reports.

Dr. Neil Bentley, the Secretary, having to leave, Dr. Burton Haseltine acted as Secretary during the remainder of the meeting.

UNFINISHED BUSINESS.

AUDITING COMMITTEE.

Dr. George A. Suffa reported that the Auditing Committee had examined the bank deposits and checks paid out and found everything O. K.

It was moved, seconded and carried that the Report be adopted.

DR. DEAN W. MYERS, Ann Arbor, Mich.: It seemed to me in the arrangement of the program it would be a little bit better if we were to have the Report of the Secretary and Treasurer at the first session of the Society, and then if any recommendations arose from the Secretary or Treasurer's reports they would be before the Society early in the meeting, and such action taken as might prove advisable on the occasion of our second business session; and also that we hold our second business session in the morning instead of almost the last thing of the afternoon of the last day. If it could be held in the morning at 9 or 10 o'clock it would make it possible if any other business matters arose to have another business session Wednesday afternoon and clean up the business later in that way. At any rate we would have the business taken care of early in the day, and that business session would not be in the way of the program in the afternoon. I would, therefore, recommend that the suggestions be adopted that the reports of the Treasurer and Secretary and Report of the Necrologist be given on the first day, and the second business session be held in the morning instead of the afternoon. /

It was moved and carried that the list of officers as read by Dr. King be elected.

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THE PRESIDENT: This closes our scientific session for this meeting and there only remains a very essential part of the 1919 program, the clinic which the New York men have provided, and which you heard of yesterday afternoon from Dr. Hallett. This represents a vast amount of work, and if you have deemed it worth your while to come to Asbury Park for this part of it, you should feel equally inclined to go to New York and not miss this clinic. I hope to see everyone of you there. Those of you who wish to go to-night can do so. Be sure to be at the Hospital at 10 o'clock in the morning.

Adjourned sine die.

CHARLES A. BOWER, M. D.

THE death of Dr. Charles A. Bower, of Mitchell, South Dakota, has been reported to the JOURNAL by one of our members. His death, by accidental drowning, occurred on January 21st, at St. Petersburg, Florida, where he was spending a short vacation. Dr. Bower was at one time president of the Homœopathic State Society of South Dakota. He was a specialist in eye, ear, nose and throat diseases, a well known and capable physician, and in his untimely death the profession sustains a distinct loss.

Journal of Ophthalmology Otology and Laryngology

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No. 4

Editorial

THE NEED FOR CRITICS (Continued).

THE March issue of the JOURNAL contained an editorial dealing with this same subject, but merely in a general way, the privilege of considering a few concrete examples having been reserved for the present issue.

The examples selected for consideration are three in number and taken from one volume, *The Transactions of the Ninth Otological Congress*, Boston, August 12 to 17, 1912. Edited under the direction of the Publication Committee by Dr. Henry O. Reik, Secretary-General. Published by Williams & Wilkins Company, Baltimore.

The claims to be dealt with were made by Evelyn Wyman Nagle, Boston, Mass., in an article, entitled "The Vaccine Treatment of Suppurative Otitis Media," page 113; by Charles J. Heath, of London, England, in an article, entitled "The Prevention of the Deafness and Mortality which Result from Aural Suppuration," page 413, and by Sidney Yankauer, of New York City, in an article, entitled "The Conservative Treatment of Chronic Aural Suppuration," page 429.

All these authors deal with one problem, *i. e.*, the treatment of chronic middle-ear suppuration, as will be observed in the quotations that follow; each takes a distinctively different view of the problem of treatment, and each, judging by his or her claim, cures the majority of the cases treated.

For instance, on page 115 Dr. Evelyn Nagle remarks, among other things equally ridiculous, "At the annual meeting of the Laryngological, Rhinological and Otological Society in 1910 I reported 40 cases treated by vaccine; 39 out of the 40 cases of chronic suppurative ears were cured. Some of the cases were treated as far back as four years ago. There have been relapses in 2 of the cases, as follows: . . ."

Her concluding remarks read: "In all, 70 cases have been reported by me during the past four years; of these 60 have remained dry; 5 failed to continue treatment, 2 have recurred, and 3 are still under treatment at present."

No one else among the thousands who have since used vaccine in chronic middle-ear suppuration has been able to approach anything like this exaggerated claim. It would be unnecessary to disprove claims of this kind if it were not for the damage wrought by allowing them to go unchallenged. For instance, the publicity of any article in the proceedings of an international congress establishes a prestige for the author and lends considerable weight to his or her contentions. Sherman & Company, who, a few years ago, put out a book, ostensibly for the purpose of spreading before the profession a knowledge of the subject of vaccines and their uses, but which in reality was a veiled advertisement for their products, took advantage of the opportunity to quote Dr. Nagle, and numerous others who seemed to be struggling hard to beat her to it so far as exaggerations are concerned. Where were the critics?

We come next to Charles J. Heath, F. R. C. S., London, who, for whatever he may lack in scientific knowledge proved himself to be a gentleman at least under very trying circumstances, for which he won generous applause during the closing discussion of his paper. It is difficult to quote satisfactorily from his article because of more or less ambiguity that crops up here and there. His claims essentially are, "that disease in the mastoid antrum is the usual cause of perpetuation of suppuration in the tympanum," page 416. Farther down in the same paragraph we read, "As my own statements to the same effect were published in 1906 and 1907, and as in the interval I have been unable to discover a single authentic exception to this rule, it surely is reasonable to demand, as a guiding principle in diagnosis and treatment, that a persistent discharge from the ear should be regarded as practically associated with some disease in the mastoid antrum."

Referring to the mortality following his modified radical operation compared to the more usual methods, he claims, on page 417, "The first notable feature in the schedule is the disparity in the mortality at the various institutions. Among the cases at the Royal In-

firmly, Edinburgh, it is forty-five times as great as among mine at the Throat Hospital." Relative to the value of his method compared to other methods for the conservation of hearing he says: "Yet, even so, the restoration of normal or nearly normal hearing in my cases there was about three times as frequent as at Edinburgh, because my operation was earlier."

Heath received some rough handling by those who discussed his paper. A reading of his paper and his replies to the queries put to him would not impress the average man of lack of sincerity so much as a lack of knowledge of his subject, especially the pathological side of it. His paper and discussion is therefore of little or no value from the scientific standpoint. But we must take off our hats to a veritable gentleman.

We finally come to Yankauer and his method of curing chronic middle-ear suppuration. Yankauer is original, to say the least; furthermore, he is a student and a hard worker; nevertheless his claims for results cannot be allowed to pass unchallenged. On the whole his paper was a masterly one, of decidedly higher type than Dr. Nagle's or Mr. Heath's. He covers the subject of the pathology and operative methods that have been tried up to date. In this paper and others his contention has been that the majority of middle-ear suppurations tend to chronicity because of a patulous Eustachian tube and perforated tympanic membrane, and if the Eustachian tube can be closed off successfully the chronic middle-ear suppuration can be cured in the majority of cases. Furthermore, he contends that his method of closure is more simple and is preferable to any other.

Dr. John L. Lougee at a meeting of the A. M. A. at Atlantic City in June, 1914, presented a paper on "End-Results Following the Yankauer Operation on the Eustachian Tube," and disclaimed all that Yankauer had claimed. Lougee says on page 174 of the "Proceedings of the Section on Laryngology, Otology and Rhinology," that "Out of twenty-five cases treated in but one has the tube remained permanently closed with ear dry." In the closing paragraphs the same author remarks: "Does curettage of the Eustachian tube add anything to this treatment? In my experience it is of little value."

"I do not believe that it is possible to close the Eustachian tube permanently."

Here are two authors claiming diametrically opposite results from the same procedure. If one is right the other must be wrong, and the one who is wrong must have exaggerated. G. W. M.

HIGHBROWS AND LOWBROWS IN MEDICINE.

A FEW weeks ago a highly educated ophthalmologist came into my office bringing a patient suffering from a severe central corneal ulcer. He reported that for six weeks the case had resisted all known methods of treatment, and in despair of saving any vision he had come to see if I might possibly make some suggestions that would be helpful.

The case had been most carefully "worked up," to use his phraseology. The anamnesis was wonderful, going back several generations and including several collateral divisions of the family. Repeated Wassermann reactions were reported all disappointing—meaning negative.

Cultures had been made from the ulcer and various bacteria named. Several urinalyses were equally unhelpful. Skiagraphs had been taken of all bony sinuses and nine teeth had been extracted, some of them on suspicion. The tonsils had been extirpated and in a highly skillful manner. The ulcer had been cauterized, but in spite of all this the eye grew worse, and did, indeed, seem to be in a desperate condition. Focussing attention exclusively upon the orbit the picture was gloomy enough, but letting the glance wander casually over the remainder of the patient the problem was too easy.

Asked if there was any hope of saving the eye I replied, "Good Lord, Doctor, your patient will be well in two weeks. Take him home, give him a four-hour sweat and a gallon of water; clear out the bowels, put a little more atropin into the eye and watch him get well." The two weeks' schedule was made good and the eye healed with useful vision.

The above story is told for two purposes: First, for vulgar personal advertising, as showing how valuable a consultant is the writer of this editorial; second, as typical of a situation that occurs all too often in the practice of highly trained specialists. We have grown altogether too "highbrow" in our so-called scientific habits. Diag-

EDITORIAL.

nostic precision is still leading us off into the clouds. Of course, we want cultures and cytological tests, and anamnesis and refined diagnostic terminologies, but meanwhile there do exist constipated bowels and dirty skins, and the highbrow who can't see them loses to the lowbrow follower of cults.

I have, as O. Henry says, taken notice of some of the ways of the lowbrow, whether he call himself osteo- or chiro- or homeo- path, and I find him often not such a fool as he pretends to be. He has many resources besides his particular fad, and if his results are sometimes wrongly accredited the main thing is that he gets them. The chief concern of the patient still is to get well, and it is hard for him to be satisfied with scientific helplessness. What a pity there is so much of lowbrow common-sense kept out of standardized training by the self-satisfaction of highbrow medicine.

B. H.

ATTENTION.

IN order that the JOURNAL may be saved a considerable amount of money in postage the members of the O., O. and L. Society are requested to pay up their dues promptly and fill out the new form sent out recently by the Treasurer, Dr. Muncy.

This form has been authorized by the postal authorities at Washington.

Members of the O., O. and L. Society are requested to forward immediately to the Bureau Chairman titles and abstracts of papers to be read at the Cleveland meeting. By so doing you will contribute materially to the success of the meeting.

Every member of the O., O. and L. Society should do his utmost to get to the meeting in Cleveland. Lay everything aside for this purpose. It will be a profitable investment. You owe it to yourselves and the Society to turn out in force.

CATARACT EXTRACTION BY THE INTRA-CAPSULAR METHOD—ADVANTAGES AND TECHNIQUE.*

DEWAYNE HALLETT, M. D.,

New York.

THE ADVANTAGES OF REMOVING THE CATARACT IN ITS CAPSULE.

THAT method of cataract extraction most free from loss of vitreous and post-operative inflammation is the one most desired by the surgeon, for the reason that the patient will then secure normal vision in every case where the eye possesses a clear media and a normal fundus, and I believe we find that method most perfectly developed in the technique of Major Henry Smith, of the British Army, as modified by the use of the Fisher lid-hooks and in some other minor details.

The usual cause of an escape of vitreous from the eye is from pressure of the lids upon the globe, and this can be reduced to a minimum by abandoning all mechanical spring specula in favor of the separate lid-retractors held by the competent assistant.

The most common cause of post-operative inflammation is the retention within the eye of portions of the capsule and cortical substance, shreds and particles of which may lie or get within the lips of the corneal wound. This cause is obviated by extraction in the intact capsule.

Infection of an operated eye will lead the surgeon to severe and painstaking scrutiny of every detail connected with the case, including the nurses, solutions, assistants, instruments, himself, his technique, and the post-operative conduct of the patient.

Such infection is not infrequently due to delayed healing or the reopening of a partially closed wound, and this cause can be greatly reduced by permitting the dressings to remain undisturbed for five or more days: a procedure to which we take more kindly if the anterior chamber harbors no capsule or lens substance.

*Read at the meeting of the O., O. and L. Society, Asbury Park, N. J. June, 1919.

CATARACT EXTRACTION BY THE INTRACAPSULAR METHOD.

When the cataract is extracted in its capsule there remains no opaque substance in the area of the pupil; there can be no secondary capsular cataract subject to further surgery; the pupil is black; there is far less liability to iritis, secondary glaucoma, irido-choroiditis, and all those slow degenerative changes which cause the eventual loss of many aphakic eyes, months or years after extraction by methods in which the capsule is left behind.

The cataract may be extracted while still immature, thus saving the patient from the months or years of waiting for a ripening, as is the custom otherwise, and this means a great deal, since the patient is usually already advanced in age and liable to degenerative retinal changes. When required to wait they are deprived of many physical joys, and exercise, and are often greatly depressed by the loss of vision.

A year or more may be saved to the patient by extraction in the capsule of the immature cataract, and it is proper to do this when one has advanced to the point of rendering vision no longer serviceable for ordinary purposes, and particularly if a similar condition is approaching in the other eye.

In this method there are, I believe, no dangers greater than are present in other methods.

THE VALUE OF A PRELIMINARY IRIDECTOMY.

It often happens that the cataract patient is making his first acquaintance with a hospital, in which case he is apt to be apprehensive, nervous, fearful, and in a state of tension.

A preliminary iridectomy under these circumstances teaches the patient that an operation upon the eye can be painless, and also it provides that state of the eye in which the extraction is more rapid, less liable to complication, and affords better average visual results. It promotes a cordial relationship in which the patient comes to the operating table for the extraction in a more tranquil frame of mind and body. It avoids the probability of blood in the anterior chamber, which, in the combined method, may obscure the operative field. As compared with the simple extraction, it avoids the likelihood of the iris hanging over the edge of the lens as it engages in the wound, and there is less danger of entanglement of the iris in the wound. The lens

emerges more gradually and therefore vitreous loss is not so apt to occur. The corneal wound for iridectomy is small and affords less chance of ill effect from any faulty conduct on the part of the patient.

Ten days or more should elapse before the extraction.

PREPARATION OF THE PATIENT.

Take the blood pressure; make a physical examination and a urinalysis.

Make a bacterial examination of the conjunctival secretion.

Instill of a 25 percentum solution of argyrol, gtt. i. t. i. d., for one or two days.

Clip the outer half of the eyelashes from the upper lid to one-half of their length.

During the preceding evening, give of compound licorice powder one dram, and in the morning an enema.

Scrub the face with soap and water the day of the operation, and the region of the eye with a solution of bichlorid of mercury, 1-6000.

Apply a wet dressing of bichlorid, 1-6000.

A half hour before the operation administer a hypodermic of Abbott's H. M. C., one-half strength.

Just before the operation instill cocain, 4% solution, four times, and adrenalin twice, about a minute apart.

Finally, flush the entire conjunctival sac with a warm solution of boric acid.

STERILIZATION OF INSTRUMENTS.

All knives and cutting instruments are immersed in absolute alcohol for twenty minutes; then laid in a tray where boiling water is poured over them, after which they are laid out on a sterile towel until wanted for actual use.

Other instruments are boiled for a period of five minutes in a weak ($\frac{1}{2}\%$) solution of sodium hydrate, followed by alcohol and flushing. Were it not that the cutting edges are dulled by boiling, all instruments would be so treated, since it is the one certain method of sterilization.

TECHNIQUE FOR THE RIGHT EYE.

The surgeon stands behind the patient's head and fixes the eye with forceps, catching firmly the lower border of the internal rectus

tendon, using the left hand, which has been passed under the assistant's right arm.

In this position the surgeon, holding the knife as he would a pen, lays it flat upon the cornea, cutting-edge upwards (toward the brow) in the position just short of half of the cornea, below which he proposes to traverse the anterior chamber.

Then he draws the knife toward the temple and drops it down to the level of the limbus, and then passes it into the eye and straight across the anterior chamber to emerge at the opposite limbus. The counter puncture having been made, the handle of the knife is depressed so that the point may sweep above the inner canthus. The incision is finished by one upward forward sweep, if possible; at least with the fewest possible strokes, cutting out through the cornea one or two millimeters short of the corneo-scleral junction.

The assistant stands on the left side of the patient and holds the lid-hooks (retractors), upon which his entire attention is fixed. The lids should be held away from the eye without any too considerable tension. The two prongs of this Fisher lid-retractor (hook) under the upper lid should be well up above the tarsal cartilage to obviate the danger of slipping out.

It is occasionally helpful if a second assistant hold up the patient's brow with his finger.

With another retractor the lower lid is held down just enough away from the eye to free it from contact and to afford operating room, but the retractors should never draw the lids so apart as to cause the patient any pain. Properly held, these retracting hooks will wholly prevent any orbicularis or frontalis muscle contraction from making pressure on the eye, and should the patient act in so faulty a manner, the competent assistant will control the situation by only such traction as may be necessary.

THE DELIVERY OF THE CATARACT.

The surgeon shifts his position to the right side of the patient (this is important, as it affords observation of the entire operative field even if the patient looks upward, and the patient is never requested to look downward, and will naturally look straight toward the ceiling or will rotate the eye upward, and this is the safe position

of the eye for the lens delivery; the position in which there is the least likelihood of loss of vitreous). However, in case of a really prominent eye it is frequently unnecessary that the surgeon shift from the head of the patient.

The surgeon holds the Smith hook (an instrument like a large-sized strabismus hook) in the right hand as he would a pen, and in the left hand the Smith-Fisher instrument (a spatula at one end and a needle point at the other). The Smith hook is laid flat upon the cornea, point upward, and about 3 millimeters from the lower limbus with pressure steadily backward toward the posterior pole of the eye, and to this inward pressure is added a lateral sliding of the hook.

The suspensory ligament is expected to break at the upper part of the lens and the lens to present in the wound.

Continued pressure is made till the cataract passes its equator through the wound, the hook following it up with steady and gentle pressure. The lens is then hanging in the wound and the hook is then tilted with the point raised from contact with the cornea, but with gentle pressure maintained with the elbow of the hook, and the point slowly and deliberately passed around the cataract, sweeping it out of the eye. The point must not push the lens for fear of rupturing its capsule, nor enter the anterior chamber for fear of rupturing the hyaloid membrane.

During the time of making pressure with the Smith hook, the surgeon holds in his left hand the Smith-Fisher instrument with the spatula end just above the corneal wound ready to pass it into the wound behind the lens, up which it may slide as on an inclined plane in case of previous prolapse of vitreous.

Or, in case the lens will not pass beyond its equator, to reverse the instrument and pierce it with the needle point and therewith drag it out. This latter procedure is not to be resorted to, however, unless absolutely necessary, for the reason that the lens may then peel out of its capsule and leave it within the eye or between the lips of the wound. Rather should the surgeon be patient with his backward and sliding pressure.

TECHNIQUE FOR THE LEFT EYE.

The surgeon stands upon the left side of the patient throughout the operation; the assistant upon the right side.

CATARACT EXTRACTION BY THE INTRACAPSULAR METHOD.

The assistant holds the Fisher double lid-hook in his left hand and the other retractor in his right hand, raising that arm in order that the surgeon may pass his left hand beneath it, in which, for the incision, he holds the forceps and fixes the eye by grasping the lower border of the tendon of the internal rectus muscle, and later the surgeon holds in this hand the Smith spatula (the Fisher needle at its upper end).

The section of the cornea and the delivery of the cataract follows, as heretofore described.

THE TOILET OF THE EYE.

If the operation has progressed favorably to this stage the wound will be closed, but the edges of the iris may be caught in it.

Do not ask the patient to look down, but replace the iris with the Smith repositor, entering it at the angles of the wound.

Seldom is there any occasion for any final flushing of the eye.

The hooks are removed, the upper one first, admonishing the patient to close the eyes in just the manner of going to sleep. A miotic is instilled (there being no capsule or cortical substance in the anterior chamber to excite an iritis), a sterile ointment on the lids, a thin moist dressing (solution of bichlorid of mercury, 1-6000) applied, followed by a thin dry one, strapped with zinc oxid plaster, and finally a Fox perforated aluminum shield also fastened with adhesive straps. A dry dressing on the other eye, and the patient is placed in bed, comforted with whatever cheerful remarks the circumstances will permit and advised to keep the eyes quiet, not to roll them about, and particularly never to squeeze the lids together.

THE AFTER TREATMENT.

The first dressing is made on the fifth day, a drop of atropin instilled and a cathartic given.

On the fifth or sixth day the dressing is omitted from the unoperated eye. On the sixth or seventh day a back rest is allowed, and on the eighth or ninth, all going well, the patient may sit up in a chair. On the ninth or tenth day a drop patch may be substituted, and usually on the twelfth day a discharge may be given. Atropin in a $\frac{1}{2}$ or 1% solution is usually continued for another week.

These specifications are subject to modification according to the

temperament, the conduct, or the physical state of the patient, but in general they are believed to represent the method likely to yield the best result.

A test of vision made before the patient leaves the hospital is of value, even if somewhat imperfectly made, since it affords data for a completed chart or record, and if the patient is shown that practical vision is present it provides a contented mind.

With the ophthalmoscope the intraocular condition should be observed.

A month or so later glasses may be prescribed.

The following is a list of all intra-capsular extractions made by the writer at the New York Ophthalmic Hospital to date, listed according to the visual results obtained.

The cause for visual results of less than 20/40 is appended.

No.	Name.	Capsule intact.	Age.	Lens.	Referred by	Result.	Loss of Vitreous.
1	C. E. T.	Yes	72	Immature	Private	20/10	None
2	Mrs. J. G.	Yes	69	"	Clinic	20/10	Following
3	A. H.	Yes	52	Mature	Private	20/10	None
4	Mrs. E. F.	Yes	60	"	Clinic	20/15	None
5	George L.	Yes	72	Immature	Dr. J. L. B.	20/15	None
6	Mrs. J. D.	Yes	61	Mature	Private	20/15	None
7	Mrs. C. C.	Yes	64	Immature	"	20/15	None
8	Mrs. M. B.	Yes	70	Mature	"	20/15	None
9	Edw. K.	Yes	57	Immature	Clinic	20/15	None
10	W. H. T.	Yes	63	"	"	20/15	None
11	W. A. M.	Yes	59	"	Dr. J. E. T.	20/15	None
12	Mrs. H. F.	Yes	66	"	Private	20/15	None
13	John A.	Yes	59	Mature	Clinic	20/20	None
14	Edw. K.	Yes	55	"	"	20/20	None
15	Mary W.	Yes	67	"	"	20/20	None
16	Fred. S.	Yes	53	"	"	20/20	None
17	Kate C.	Yes	52	"	Dr. G. G. M.	20/20	Preceding
18	Mrs. L. D.	Yes	65	"	Clinic	20/20	Following
19	Mrs. F.	Yes	60	Immature	"	20/20	None
20	Thos. M.	Yes	65	Mature	"	20/20	None
21	Mrs. E. R.	Yes	75	"	"	20/20	None
22	Mrs. L. D.	Yes	66	"	"	20/20	None
23	Edw. C.	Yes	69	Hypermat're	Dr. C. C. S.	20/20	None
24	Mrs. S. S.	Yes	79	Immature	Clinic	20/25	None
25	Thos. F. B.	Yes	58	"	Private	20/25	None
26	Mrs. R. Q.	Yes	76	Mature	Private	20/25	None
27	Mrs. S. V.	Yes	73	"	"	20/25	Following
28	Thos. M.	Yes	64	"	Clinic	20/30	None
29	Mrs. E. P.	Yes	84	"	Private	20/30	None
30	Mrs. C. B.	Yes	72	Immature	Clinic	20/30	None
31	John B.	Yes	76	"	"	20/30	Following
32	Mrs. M. L.	Yes	67	"	Dr. G. G. M.	20/30	None
33	Mrs. M. M.	Yes	70	Mature	Clinic	20/30	None
34	Mrs. R. B.	Yes	57	"	"	20/30	None
35	Mrs. K. M.	Yes	55	Immature	"	20/40	None
36	Mrs. H. B.	No	55	"	Private	20/40	None
37	Mrs. E. D.	Yes	48	"	"	20/40	None

CATARACT EXTRACTION BY THE INTRACAPSULAR METHOD.

No.	Name.	Capsule		Lens.	Referred		Result.	Loss of Vitreous.
		intact.	Age.		by			
38	Miss F. H.	Yes	54	Mature	"		20/40	None
39	Mrs. M. W.	Yes	71	"	Clinic		20/50	None
40	Mrs. B. A.	Yes	67	"	"		20/50	None
41	Mrs. F. G.	Yes	64	Immature	"		20/70	None
42	H. Q.	No	59	Nuclear	"		20/100	None
43	H. Q.	No	58	"	"		20/200	None
44	Jas. M.	Yes	65	Immature	"		10/200	None
45	Jas. M.	Yes	65	"	"		4/200	None
46	Mrs. L. S.	Yes	75	"	Private		2/200	None
47	Mrs. D. F.	Yes	68	"	Dr. G. G. J.		1/200	None
48	Sam'l C.	No	79	"	Clinic		None	None

SUMMARY OF FORTY-EIGHT CONSECUTIVE EXTRACTIONS.

In 44 cases the capsule was intact.

Of the 4 cases in which a part or all of the capsule remained within the eye, 2 had a subsequent irido-cyclitis, and 2 were in eyes affected by prior chronic glaucoma.

In only 5 cases was there a loss of vitreous; 4 following, and 1 preceding delivery of the lens.

Each of the cases in which a vitreous loss occurred secured a final vision of 20/30 or better.

Glaucoma was a prior complication in 6 cases, 2 of whom secured a final vision of 20/30 or better.

Atrophy of the optic nerve was a prior complication in 1 case.

High myopia with posterior staphyloma was present in 4 cases.

Retinal hemorrhage was a prior complication in 4 cases.

Two cases had corneal scars.

Subsequent complications were: 3 patients struck their eye during sleep; 2 squeezed their lids and opened the wound, each on the eighth day; 4 developed irido-cyclitis, in one of whom the eye was lost; 1 had an endarteritis with retinitis proliferans; 1 left the hospital in perfect condition and later had a detached retina, apparently the result of uncontrolled weeping on account of the supposed loss of a son in the war, and 2 had a mild and unimportant iritis.

The average age was 65 years.

There were 22 immature; 23 mature; 2 nuclear and 1 hyper-mature cataracts.

A preliminary iridectomy was made in all but one case.

The iris appeared free from the wound at the time of applying the dressing in all but one case.

Subsequently the iris was found caught up by one pillar in 8

cases, and by both pillars in 2 cases, none of which required any further surgery.

Case No. 39 had high myopia with posterior staphyloma.

Case No. 40 had an atrophy of the optic nerve.

Case No. 41 had atrophic changes in the macular region, together with high myopia and posterior staphyloma.

Cases Nos. 42, 43, 44, and 45, on this list, were respectively the right and left eyes of two patients in whom a simple chronic glaucoma was a known prior complication, and for whom a poor visual result was fully expected and could not be otherwise. Each had been the subject of an Elliot-sclero-corneal trephine operation, and they were given their only chance of useful vision.

Case No. 46 was known to have had a previous retinal hemorrhage.

Case No. 47 was the one with a subsequent retinal detachment.

Case No. 48 had had a previous iritis in the other eye and was accepted for cataract extraction only after four months of treatment and observation. When operated the eye appeared quite fit, but a subsequent disastrous irido-cyclitis developed.

Of the 8 cases in whom the final vision was 20/70 or poorer, there were then only 2 in which good vision was a possibility.

These 8 cases represented 21% of the total number.

And, of the entire series of 48 cases:

79% obtained 20/40 or better;

70% obtained 20/30 or better;

56% obtained 20/25 or better;

48% obtained 20/20 or better;

92% had an intact capsule.

Excluding the 8 complicated cases, the visual results of the remaining 40 averaged 20/25.

There was a loss of vitreous in less than 11% and since each of these secured a vision of 20/30 or better, it surely was a complication of no special importance.

These cases were taken as they chanced to come, and operated whenever it seemed probable that their vision would be improved.

274 West 86th Street.

CATARACT EXTRACTION BY THE INTRACAPSULAR METHOD.

DISCUSSION.

PRESIDENT: I hope that we will make this session extremely informal, and along this line I wish to ask how many have done the intracapsular operation? raise your hands. (Ten hands.) I just counted thirty-eight members in the room; that is ten out of thirty-eight. Now how many prefer it clinically to the old-fashioned method? Seven. We are fortunate in having this subject and I wanted to make this brief survey to know what percentage were really interested in it. Dr. Hallett, we know, has been having some fine results, and when I was at the New York Ophthalmic Hospital in December he showed me his patients. There is no question that when the capsule can be removed with the lens we fear the loss of vitreous. If that can be eliminated there is no question but that we are overlooking a technic which our patients are entitled to. I think we are very fortunate in having Dr. Hallett to open this with his very valuable essay and then to have two men who are almost if not equally as noted to discuss it, really furnishing a symposium on this subject. The next will be Dr. Myers, then Dr. Sternberg.

DEAN W. MYERS, Ann Arbor, Mich.: I do not think there is very much for me to say in discussing this paper. Dr. Hallett has covered the subject very thoroughly and he has been very specific in his analysis of the operation, the technic, the minute detail,—so that any operator who has ever removed a cataract can readily learn this method by reading Dr. Hallett's paper and studying it. My belief in the operation has not changed at all since I first advocated the procedure something over ten years ago, and presented more or less incomplete papers to this Society something like nine years ago. The first operation that I did was probably twelve years ago. That operation happened to be a very fortunate one, done on a patient eighty-four years old, who had had the old operation performed upon the other eye, followed by several needlings. The surgical result was very beautiful and convinced me that if it could be done as successfully in a majority of cases, it would be highly satisfactory. This result led me to go on with the procedure. Today there can be no question that the removal of the lens in its closed capsule is a desirable procedure. One of the principal reasons for it is that you will have a clear field following the operation without subsequent surgery. You will have

a clear media, you will have removed from the eye the obstructing opacities and you will have it with one clean surgical procedure. Your technic may vary; there is an opportunity for discussion, I believe, as to whether or not you will make an iridectomy before the operation, whether you will make the so-called preliminary iridectomy or whether you will or will not make an iridectomy at the time you extract the lens.

The preliminary iridectomy has its advantages. It makes the closed capsule extraction easier. I do not want those of you who have not done this operation to think that it is the easiest thing in the world to do. It sounds easy, it is easy in the hands of one who has had experience, but it is not as easy as the old combined operation. Any procedure that will make it easier for you to extract the lens in its closed capsule without loss of vitreous and without injury to the eye, I believe desirable. The preliminary iridectomy will do this. If the patient can take the time or stand the expense, it is a very fine procedure. Many of my patients are limited in means and can come to the hospital but once, must be operated at once and have the complete procedure at "one sitting." However, the extraction of the lens in the closed capsule following a preliminary iridectomy is an excellent procedure. Personally, I have advocated and performed the operation without iridectomy more than with iridectomy, and I safeguard the iris against prolapse by a small iridotomy (puncture of the iris) near its base, sometimes only with a cataract knife, occasionally increasing the opening a little with fine pointed scissors. That is not necessary unless the intraocular tension is slightly above normal. If above normal, or if the eye is one of those in which there is a strong tendency to prolapse or protrusion of the vitreous, so that you are unable to replace the iris naturally and easily within the anterior chamber and have it stay there of its own free will, you had better make an iridectomy before you close the eye.

My belief is that many of these cases will squeeze the iris out in spite of the iridotomy if there is sufficient intraocular tension to make it difficult to retain the iris in place. If you find the vitreous very fluid it may be advisable to do an iridectomy even after extraction of the lens. Ordinarily it is not difficult to get the lens through the uncut pupil, but if you find it difficult to retain the iris in position

after the delivery, and the vitreous is very fluid, you had better make an iridectomy then because you will probably have tucking up, at least, of the iris and in all probability some prolapse. In all cases in which you are not able to return the iris to the anterior chamber readily, the iridectomy is advisable, and if you can control your case I believe in a preliminary iridectomy for many operators. Personally, I do not do it. I have had the opportunity of operating upon a few cases in which iridectomy had been performed by someone else previously, and I found the extraction of the lens under these circumstances very easily accomplished.

I believe if a preliminary iridectomy is performed, a longer period than ten days should be allowed before the extraction. Even though it heals very nicely, anyone of you who has attempted to operate on an eye shortly after the first operation knows that the local anæsthesia is not complete or is extremely difficult to obtain, and the second operation is very apt to be extremely painful to the patient. It is possible that a case might recover sufficiently in ten days, or it might be one of those in which the nervous system is not very sensitive, in which case you could go ahead in ten days. Ordinarily the lapse of a month or six weeks following iridectomy is better. That can be done in intracapsular extraction if you follow the suggestion of operating on these patients before they are totally blind. That probably is, after all is said and done, the most important reason for extracting in closed capsule,—the opportunity it affords for operating on immature cataracts. To operate successfully before the cataract is ripe is one of the principal features of this operation. You may, therefore, do an iridectomy which would temporarily improve the vision and allow the patient to wait a sufficient time to have healing complete and the eye return to the normal state before the extraction is done.

Dr. Hallett is to be congratulated upon the remarkable results in his forty-eight cases. At present I know of no one who has secured so many results with perfect vision. He has a large number of cases in his list in which he has obtained 20/15 vision. Either he has a very unusual quality of patients, a grade of patients in which there are no lesions of the fundus or other disturbances which result in defective vision in these old people, or else his technic is so won-

derfully perfect that he gets much better optical results than most of us do. Something has combined to favor him with a very beautiful report and I feel that he is to be congratulated upon the results that he has obtained.

JOSEPH E. STERNBERG, Boston, Mass.: I am sure we have all enjoyed Dr. Hallett's instructive paper, and compliment him on the very thorough and able manner in which he has presented it. In my own experience with 12 cases of cataract extraction by the intracapsular method, I have come to the conclusion that when the incision is completed with a slight conjunctival flap, healing takes place more readily than in those cases where the section is purely corneal.

In 9 of my cases where the incision ended in the cornea it took from ten days to three weeks for perfect union. This fact tempted me to try the slight flap, with the result that in the remaining 3 cases firm union was noticed at the end of the fourth day in 2 cases, and on the fifth day in the 3rd case.

I follow Dr. Fisher's method as closely as possible in the post-operative care. Inspection of the lids is made on the third day—the bandage is removed and the lids inspected. If there is no swelling the bandage is replaced over the operated eye and the un-operated eye is left uncovered; the room is darkened and no further inspection made until the seventh day.

As a rule, post-operative pain is very slight; however, to guard against any unconscious movement on the part of the patient during the night, both wrists are tied down to the sides of the bed, allowing only enough movement of the hands for the patient to change his position but not enough to touch the eye. If the patient has a trained nurse his hands are tied to the nurse's hands during the night, and in case the nurse falls asleep she will be quickly aroused by the tugging.

I want to emphasize the importance of having a trained assistant who is thoroughly familiar with manipulating the hooks. He must know what to do when there is danger; how to act without being told.

As to preliminary iridectomies, that, I believe, is a matter of personal choice; unless the patient is extremely restless and nervous I do not do it. In my cases cited no preliminary iridectomies were made. I feel that entering the eye twice increases the danger two-

fold. I note that Dr. Hallett trims the lashes in his cases. I question the advisability of this move; to me it seems that manipulating the lids and inspection is much easier if one has something to get hold of, especially when closing the lids immediately after the operation.

I note that in Dr. Hallett's 48 cases no infection has taken place, as in my own. I am sure this is the result of leaving them alone. There is no question that it is caused by unnecessary manipulation, such as flushing the eye after operation. If any secretion remains in the eye after the operation I remove it with a moistened piece of cotton or withdraw it with a medicine dropper.

The question of using drugs in the eye is an important one. Why use them at all? We are taught that if the extraction is as it should be there is nothing left behind to produce irritation. Yet in three of my cases I had to resort to the use of atropin for the severity of the iritis which occurred after the second week.

This raises the question of the hyaloid membrane. I am inclined to believe that it is a prominent factor in producing the cases of iritis. When the lens and capsule come away intact the vitreous body surely changes its form; it stands to reason that there is contact of hyaloid membrane and iris. I know of no text-book or operator who has brought up this question, and would be grateful for a thorough discussion of this point.

DEAN W. MYERS: May I refer to Dr. Sternberg's question about the hyaloid membrane? Personally, I would not expect, if there is iritis, to lay it to contact with this membrane. The hyaloid membrane is just as smooth as the capsule of the lens and, it seems to me, contact with it would do no harm. I think iritis more apt to be due to traumatism when extracting the lens.

RALPH I. LLOYD, Brooklyn, N. Y.: The question of the hyaloid membrane is rather interesting because there has been recently a note in one of the eye journals by Dr. Zentmayer, of Philadelphia, bringing up the question as to whether there is a real hyaloid membrane or not. There seems some doubt about that. Whether this which develops and later takes on that peculiar sheen in a result of inflammation or is a thickening of tissue normally transparent is the question. It is my thought in connection with the inflammation that if it begins

as late as three weeks after operation I should regard it as suspicious of glaucoma. There are more glaucomas after cataract operations than we assume. From experience, recently, I would say that this membrane certainly does develop, adhesions between the iris and membrane are present and in not a few cases there is distortion of the pupil. I know of three cases of glaucoma secondary to Smith cataract operation and the presence of the membrane spoken of was very evident, and I might say that the first case of glaucoma after cataract I did not realize was glaucoma until some little time had passed. Delayed healing would also suggest the presence of glaucoma.

THE PRESIDENT: It appears that only 25 per cent. of the men use this operation. I should like to hear from some of the 75 per cent. who do not use it. Why do you not adopt this method? I will tell you why I do not. I have not any clinic. I would have to learn on my private cases and I cannot afford to undertake it. I think I would lose too many eyes. I had good results in two cases in which I did not intend to make an intracapsular extraction, but did it accidentally. One was of fifteen years' standing and I attempted to do a capsulectomy. When I took hold of the capsule to make this capsulectomy it was so thick and tough that as I removed the forceps from the incision the lens came along with it and it proved to be one of the best results I have ever made. This was in an old man. It frightened me, I was so surprised to see what I was doing, but when I admitted the next case I did not have the courage to undertake it. I would like to hear from others.

WILLIAM McLEAN, New York, N. Y.: I have done the intracapsular operation in a few cases and invariably have been very much pleased with the results. There was only one case where I operated by that method and lost vitreous, and in that case the ultimate vision was 20/20, yet there was considerable loss of vitreous. The operation that has been mentioned by the previous discussor is evidently a modification of Knapp's operation with the capsule forceps.

With that method the capsule forceps are used to grasp the capsule, and with a rocking motion from side to side tear the lateral attachments of the suspensory ligament from the lens capsule, then, with a downward movement, break the upper attachments and then

lift the capsule containing the lens out of the eye. Knapp claims to get excellent results with that method.

WM. M. MUNCY, Providence, R. I.: There is one great difference between the intracapsular operation and the older technique—in the fact that the former is a two-man operation. Almost as much depends upon the assistant as the operator himself—so much so that one should use the same assistant each time in order to secure perfect team-work.

In regard to iridectomy, I tried to follow Dr. Myers' technique. I removed the lens with the iris intact, sometimes having the pupil dilated by a cycloplegic, and at others through a normal pupil. If I felt an iridectomy was necessary to prevent iritis it was performed after the extraction of the lens. This method was used, when deemed safe, in order to obtain a normally functioning iris after the operation. I later resorted to a puncture of the iris at the root, or a small iridotomy, to produce good drainage. The number of perfect central pupils obtained with me did not seem to warrant the previous technique, and I am now resorting to either an iridotomy or iridectomy prior to the extraction.

I have recently had an interesting case of a child, markedly myopic, in which the lens was dislocated, with marked inflammation of the conjunctiva, and intense lachrimation, which, upon examination, showed a normal lens in the anterior chamber. However, when the patient appeared upon the operating table the lens dropped out of sight in the posterior part of the eye. When the ordinary incision for extraction was made, the lost aqueous, changing the intraocular tension, caused the lens to occupy the normal position in back of the pupil; and it was extracted in capsule without the least difficulty.

I do not use cocain instilled in the conjunctival sac, preferring holocain, as the latter does not cause a dessication of the cornea, which is liable to be produced if cocain is used. However, cocain, 2%, may be injected sub-conjunctivally. I do not think it best to leave uncovered the unoperated eye until the fifth day. In regard to the bandage extending from the patient to the wrist of the nurse, I should feel that the personal factor of both was too uncertain; for it might tend to make the patient more restless, and the tugging upon the wrist of the nurse while asleep might cause her, when half-

aroused, to make motions in the wrong direction. If we could eliminate all the difficulties in the after-care of our patients our operative results would be a great deal better. I feel that most of our troubles appear after the operation. Dr. Hallett's results are very encouraging, and by comparison are an improvement over the older method; but it is only an expert, careful operator, as he, who can obtain such a high percentage of excellent visions. The intracapsular operation is not easy, to say the least, and unless one has a proper assistant and the facilities for developing technical skill he had better perform the older two-step extracapsular operation. On the other hand, the above objections being removed I feel that the best results can be obtained by the intracapsular method.

JOSEPH E. STERNBERG: Relative to improving on the hook. This is a question I brought up to see if there was anyone present who could offer any improvement on the straight hook. I thought Dr. Suffa had one. *My point was*,—that at times the upper lid-hook was in the way and I thought it would be a splendid idea if it could be improved on—and would like to hear from those present if they had or knew of any. I heard Dr. Suffa had one.

THE PRESIDENT: I feel that this is such an important topic we should have more discussion. We are not crowded for time. I recall when I first saw Sam Jones, the evangelist, when he appeared upon the platform his hair was quite white and his moustache was dark. He said people sometimes asked him why his hair was white and his moustache was dark and he said that his moustache was twenty years younger than his hair. That gentleman who voted, as he walked down the aisle, to do the capsular operation, to whom this description of Sam Jones applies, and whose name I do not know. I wish he would come forward and give us a discussion and then we shall get better acquainted. (Laughter.)

JOS. F. ROE, Binghamton, N. Y.: My first experience with this operation was like yours, Mr. President; that is, practically an accident that the lens came away so easily. It seemed so easy and the result so perfect that I began to do the operation as nearly as I could after the Smith method. This operation appeals to me especially in high myopic cases. I have under observation several of these cases which are maturing cataracts and which must eventually be operated

upon. I have operated upon only four by the Smith method; three of these were very successful—one with considerable loss of vitreous. Even in this case fair vision was obtained—about one-half normal. In one of these cases there was pronounced glaucoma and I started to do only an iridectomy. I gradually gained courage and did the Smith operation, with excellent results. The risk of this method in my hands I fear is greater than by the old method, but the danger of a secondary operation by needling is entirely eliminated, which fact may even up the risks taken. Until I have more experience, which will necessitate more courage, I am not in a position to speak very intelligently upon this subject. I do not believe, however, that any one method of operating can be applied to all cases. Each individual case must be determined by the conditions found, and the circumstances.

WILLIAM J. BLACKBURN, Dayton, O.: I certainly enjoyed Dr. Hallett's paper very much because I have always done this operation for cataract, excepting in congenital cataract, as I was taught to do it by Dr. Myers. I have assisted him so often that when I had a case of my own I went ahead and got through it very nicely. My experience has not been great with these cases, but my results have been very satisfactory and I prefer it to any other operation. Someone spoke about the corneal incision healing slowly. I believe that is true. It has been my experience at any rate and I believe it is due to the fact that the cornea heals slowly because it gets its nourishment by absorption only. The closer we come to the corneo-scleral margin with our incision the more rapidly the wound heals. I have noticed that in cases where the incision included a little of the conjunctiva, the flap seemed to heal more rapidly.

I wish to report the case of a traumatic cataract in a young man, nineteen years old, who worked in a factory. A small piece of steel struck him in the eye and it was so small that we had some doubt as to whether this piece of steel had gone through the cornea, although I could see an object in the lens very plainly. I finally did see a slight mark on the cornea opposite the object in the lens. This eye never became inflamed, and the young man never stopped work when the steel went into the lens. Five or six days later the lens became a little cloudy and he had dim vision. I told him he would have trau-

matic cataract and perhaps later on we could operate on it and get him some vision. This happened in May, 1918. In November of the same year I took him to the hospital and did a cataract operation, doing an iridectomy at the time before I extracted the lens in capsule. I was afraid to do it without an iridectomy because of his being so young, knowing it would probably take a little more pressure to get the lens out without iridectomy. The lens came out nicely, healed up without any complications whatever; he left the hospital in ten days and had 20/18 vision, with correction. Of course, the corrected eye would not accept full correction without his having double vision, but with a + 7.00 D. S., he gets along very nicely. This case was slightly myopic. He has a beautiful, clear, black pupil.

I did an operation last week that I would like to report and perhaps you will think I had more nerve than judgment in that case. This was a clinic case. I do not think I would have attempted it on a private case and perhaps would not have attempted it anyhow had not the eye been blind. In fact, I told the patient that we could not expect vision as he had neither light perception nor projection. There had been old iritis adherent to the lens all the way round, contracted pupil, and symptoms of glaucoma had developed. The eye had been very painful for two weeks with symptoms of sympathetic inflammation in good eye. He had a cataract and I told him that we would do an iridectomy to relieve the tension and see what result we would get. After I had the patient on the table I used a small blunt iris hook to loosen the adhesion from the anterior surface of the lens in order to do an iridectomy. I did an iridectomy and then thought I would try to get the lens out. I took the back of a small blunt iris hook and very carefully broke up all the adhesions between the iris and the anterior surface of the lens, then I used the Fisher cataract hook, and patiently teased that lens back and forth until it began to present in the wound. I might say that I made my incision the same as I would for intracapsular extraction, because I thought at the time I might try to get this lens out. I worked with that lens for quite a little while and was about to give up in despair of getting it without rupturing, when finally it came out but left a small particle of capsule. In a week the patient had no pain in the

eye and left the hospital on the eighth day. I do not know whether any complications will develop or not. I trust there will not.

G. A. SUFFA, Boston, Mass.: In regard to the hook Dr. Sternberg mentioned, I think it is fully ten years ago that I made a speculum with an arm to it to lift the upper lid, that conformed strictly to the shape of the eyeball. After using it for some time in ordinary cataract operations, I conceived the idea of making a speculum that would lift and hold both lids, and invented one with a band around the head that was used several times at one of our clinics. The first speculum was laid away after this second speculum was made, but later I intend to have both forms placed on the market—the one to be used for the intracapsular operation, and the double one for ordinary cataract operations and other ocular operations, as squeezing the lids is impossible with these specula. Pressure on the eyeball is started by the sphincter, but the main force is exerted by the aid of the brow-muscles. If the first or sphincter action can be prevented no squeezing is possible; these specula prevent it.

DE WAYNE HALLETT: Dr. Myers' method of making a little iridotomy is no doubt a good point, since it leaves an active pupil. It is a very happy state of things to have; however, it is true that with an iridectomy it is less difficult for the lens to emerge. There is a real value in the unbroken hyaloid membrane, and in an ideal case this membrane is unbroken. I have seen the vitreous present in the wound after delivery of the lens in a rounded-up form which I believe is inside of the hyaloid membrane, and it has been observed to subside when the patient, in a general way, relaxes. I cannot say I look back upon any cases that resulted unfavorably because of high myopia. It would not deter me now from operating, other things being favorable. I have never had occasion to regret extracting the lens in ten days or two weeks after the iridectomy. However, I have no rule about it, but simply consult the convenience of the patient and make the extraction after all irritation has subsided.

Doubtless the section in the cornea which leaves a conjunctival flap heals more quickly and firmly than the section in the cornea, but those who have had great experience assert that the lens tips up and presents itself better in the corneal section than in the wound which includes a conjunctival flap. A nurse sits beside the patient for

twenty-four hours after the extraction to prevent any faulty conduct on his or her part. Of course, that will not prevent a patient squeezing the lids together. In the paper it is mentioned that two patients squeezed their lids together and broke open the wound on the eighth day.

When the lens is extracted and the hyaloid membrane unruptured the iris is probably not in contact with the hyaloid membrane, but if there is increased tension or rupture of the hyaloid, or if there has been delayed healing, then it is quite possible to have contact. Adhesions between edges of iris and hyaloid membrane I have observed on two occasions. The hyaloid membrane may become considerably opaque and will then appear like a silken sheen when observed with oblique illumination. After needling this the contrast with a perfectly black pupil is marked. The members have mentioned the fact that subsequent to the delivery of the lens they have felt the need of an iridectomy, which would seem to be an excellent argument for it. As was said in my paper your patient comes more quickly and contentedly to the extraction after an experience of an ordinary iridectomy. Entering the anterior chamber twice gives two possibilities of infection, but personally I have had no trouble between the iridectomy and the extraction.

Dr. Suffa makes an excellent point and one that I have often been conscious of, but did not mention in the paper, to the effect that the forcible contraction of the brow muscles, together with the orbicularis, has much to do with putting pressure on the globe and with prolapse of the vitreous; consequently a third assistant may restrain the frontalis muscle with the finger.

SOME TONSILLAR EXPERIENCES AT A NAVAL HOSPITAL.*

WILLARD THOMPSON, M. D.,

Dixon, Ill.

UNTIL quite recently but little was known of the streptococcus hemolyticus. Our war with Germany has taught us many things, especially in the medical world, and among these is the importance of the relation of this micro-organism to rheumatism and heart lesions, though much is yet to be learned. The subject is deserving of more research than I have been able to give it. I trust this paper may lead to further study by others, and that the relation which exists between tonsil infection, rheumatism, and lesions of the heart may be still more definitely ascertained.

Drs. Nichols and Bryan, of the Walter Reed Hospital, gave a report in *The American Medical Journal* of their experiments with the tonsil as a focus of infection, which showed that out of a hundred cases operated by tonsillectomy—the tonsils having been removed on account of their size, the presence of pus in the crypts and cervical gland enlargement—seventy-five pairs gave a positive culture of hemolytic streptococcus, thus proving the very common occurrence of it in the tonsil.

Drs. Lillie and Lyons, of the Rochester Hospital, Rochester, Minnesota, report their results following the removal of tonsils in the treatment of myositis and arthritis. They reported the results obtained in 200 consecutive cases, allowing one year to elapse after the operation the better to prove their results. Out of the 200 cases operated 154 were unable to work full time prior to operation. After tonsillectomy 118, or 77% of these, were able to work steadily. The remaining 36 were too far advanced in their myositis and arthritis to respond to any kind of treatment.

Some results obtained during my service at the Naval Hospital were very interesting; I will give you the result in one case in par-

*Read at the meeting of the O., O. and L. Society, Asbury Park, N. J., June, 1919.

ticular, this case being the most interesting, as we had time to go through the different channels of elimination. The others I have omitted on account of lack of time.

GRAHAM: Entered the hospital the middle of September with a rise of temperature and general malaise—a typical picture of hook-worm. He was operated the middle of November. During this period he ran an irregular temperature, spending the greater part of the time in bed, complaining of pains in his shoulders, loss of appetite and weakness. There was also slight anemia.

Every test was made, physical and otherwise,—blood-count, differential, plasma-smear, feces, urine, and x-ray, all reporting negatively except for the tonsil, which showed a positive hemolytic streptococcus infection. And here let me emphasize the need of caution in obtaining a culture. Care should be exercised in obtaining it from the tonsillar crypt for one is as likely to come in contact with the hemolytic streptococcus on the surface of the tonsil and pharynx as in the tonsil crypt. Iodin or alcohol should be used around the crypt you wish to enter. The applicator should be introduced into the crypt, taking care that it is not too large.

Graham was operated the middle of November for the removal of his tonsils. He was sent home ten days later on sick leave, and the last I saw him, in January, he was drilling with his company, standing his watch and feeling fine. We had a slight hemorrhage from the left tonsil—more of the oozing type than the spurting—that gave us a little trouble. It was controlled in a way that I have adopted and find very practical, viz.: the use of two forceps, one curved at the fulcrum at an angle of about forty-five degrees—the full length of the forceps about ten inches to allow clear vision of the parts. With this instrument I grasp as near as possible to the bleeding part and pull away from the lateral wall as far as the tissues will allow, reach in behind with my other forceps, which are thin-bladed and about one-fourth of an inch wide, grasp the tissue and compress, leaving the forceps on for about ten to fifteen minutes, or as long as may be necessary.

During a conversation with Dr. Smith, chief of our laboratory, I asked him what, in his opinion, the hemolytic streptococcus was.

SOME TONSILLAR EXPERIENCES AT A NAVAL HOSPITAL.

He answered that it produced a hemolysis of the blood in a blood-culture, with a fungus growth around the valves of the heart.

I will quote from a letter received from Dr. Smith in reply to one I wrote him regarding his laboratory findings:

*"Dear Dr. Thompson:—*I just received your letter asking me about the hemolytic streptococcus of the mitral valves of the heart from post-mortems performed while you were here. I certainly did find the hemolytic streptococcus on the mitral valves, and also on the aortic valves, in more than one case. Now, in addition, I always found the same organism in the blood before and after death. As you well know, I made a blood-culture on all real sick patients and always cultured the blood at the post-mortems."

In summing up these findings I would like to hear from the dentist as to what micro-organisms are found in tooth abscesses that might act as an etiological factor in myositis. One of the essentials before blaming the tonsil in masked cases is to eliminate the teeth.

It is not necessary to have a large mushy tonsil to have a diseased tonsil; an apparently healthy tonsil, with a red marginal border of the anterior pillar, a positive culture of the hemolytic streptococcus from the crypt, and a history of myositis, is more than likely to be the causative factor of the myositis.

Another little experiment I tried was operating on acute cases of peritonsillar abscess. This was a failure so far as the Sluder method was concerned, unless one had a special size made to admit the tonsil passage through the loop.

DISCUSSION.

CHARLES H. HUBBARD, Chester, Pa.: That which seems to call for special consideration in Dr. Thompson's excellent paper is the relationship existing between the presence of hemolytic streptococci in the tonsils, acting as an infective focus, and rheumatism and heart-lesions. Clinical experience has long recognized the etiologic relationship between the tonsils and teeth, and rheumatic disorders—infectious organisms producing local and systemic disturbances in near and remote parts. While streptococci are found in nearly every portion of the body, the recognition of hemolytic streptococci as a distinct species with a special affinity for certain tissues is of recent date. In fact, the experiences in the late war has brought out and exposed

the virulence of this microorganism. It is not always easy to differentiate them from other forms of streptococci, and it is claimed that other varieties may change into the hemolytic. And, again, streptococci may be non-hemolytic in the surface of tissues and hemolytic in the deep tissues. While the non-hemolytic may produce as many lesions as the hemolytic, the latter are more virulent and death more frequently follows their advent.

Laboratory experiments upon rabbits with these streptococci present many contradictory results, so that it is unsafe to accept as conclusive, experiments upon the lower animals. And it is a question whether the tonsils or the teeth are more frequently the seat of focal infection. In-so-far as my investigations go, the dentist seems to have surpassed the physician in his hunt for and practical experience with this hemolytic autocrat of the mouth.

Pulpless teeth, diseases at the apices of teeth, pyorrhœa, sinus disease, etc., are positively mobilizing centers of this strain of pathogenic organism. "Negative Roentgen findings in a foul dental pulp do not exclude the presence of foci of infection"—as results clearly demonstrate. Otitis media and many cases of mastoid infection are not infrequently associated with streptococcus hemolyticus. That acute and chronic rheumatism, cardio-vascular lesions, thyroid, renal and genito-urinary lesions and other disorders are caused by this infective agent, has long passed the stage of speculation. It is probably true that some patients—particularly among the troops—died because it seemed they were too far advanced in their troubles before operative interference: but might not other undetected foci of infection—the teeth, for example—have been the cause for non-successful treatment?

Most assuredly we must recognize that the index of resistance, no matter what variety or number of bacteria may be present, or where their natural or acquired habitat is established, has much to do with the final result.

In the light of these accumulated facts, is it not a little less than criminal for one to be indifferent to them?

While it is probable that an analysis of the breaths or cultures made from throat-swabs from those present here today would reveal many forms of bacteria, it is not necessarily a reflection upon

anyone, and does not prove that any one of us is a dangerous, infective agent.

G. C. WEBSTER, JR., Chester, Pa.: I had a rather interesting experience while in the Service in regard to hemolytic streptococci. For purposes of investigation one entire company had their throats cultured to discover the presence of this microorganism. All cases in which it was found were subjected to tonsillectomy; the result was that we had about seventy cases in the company which had one culture of positive hemolytic streptococci. They all came to operation and a culture was taken at the time of operation. One had been taken previous to that, one was taken when the case was completed, and in about fifty of these cases they were found free from hemolytic streptococci after the throat had cleared following the tonsil operation. We also had one case, a robust young chap, who developed a tonsillitis, and about the time that he was well he developed septicemia. This eventuated in his death; the post-mortem showed streptococci on the heart-valve—and the petrous bone was very much involved. Positive streptococci was secured from both places. It seemed in the cases operated a notorious fact that these tonsils looked and seemed very unoffending, and the patients complained of nothing other than the possible fact that they had at times had more or less arthritis.

BURTON HASELTINE, Chicago, Ill.: I would like to ask one or two questions of Dr. Webster. Approximately, how many men were there in the company.

G. C. WEBSTER, JR.: That I cannot tell you. The entire company was examined. A culture was taken from the throat of each member of the company and there were seventy, I think, found to contain the hemolytic streptococcus.

BURTON HASELTINE: Did you observe whether there were any positive cultures in men who had been tonsillectomized?

G. C. WEBSTER, JR.: I could not tell you that either. The cultures were not taken by our department personally. They were taken by the officers at Quarters and we only received the patients who had positive cultures.

BURTON HASELTINE: You had about fifty subsequent to operation that were clear?

G. C. WEBSTER, JR.: Yes.

WILLARD THOMPSON.

BURTON HASELTINE: This is very interesting material. In the army you can control your patients. I have had a large experience with cultures in laboratories in the army where they can be made without cost to the patient. It is interesting to know that positive cultures of both streptococci and diphtheria are found in cases who have not any particular evidence of tonsillar disease. The general practice in the army is to pay no attention to anything but the tonsils, not in ethmoid disease, and yet that is where the focus of infection often is. There are ethmoid carriers as well as tonsil carriers, and this explains why in many cases tonsil operation fails to clear up the focus. We have found that by treating the ethmoid disease we often clear up the carriers without operating upon the tonsil.

WILLARD THOMPSON: I think we have common carriers of the hemolytic streptococcus the same as for diphtheria. The common carriers are not susceptible to it, but are very dangerous to other people. This is one reason for what Dr. Haseltine said of the importance of removing those tonsils that do not look suspicious even though they may have hemolytic streptococcus.

In Camp Custer in major operations they had a very large percentage of cases of laparotomy infection, and could not account for it; they tried in every way to do away with any possible means of infection but without avail, until they cleaned up an epidemic of sore throat, traced it to its source, and found hemolytic infection of the throats. After this laparotomy infections ceased.

House Physician wanted at the New York Ophthalmic Hospital. Salary, \$50.00 per month. Apply to Chas. C. Boyle, M. D., Executive Surgeon, 40 E. 41st St.

A STUDY OF ONE THOUSAND TONSILLECTOMIES OPERATED BY THE AUTHOR.*

EVERETT JONES, M. D.,

Boston, Mass.

IN considering this series of tonsillectomies, the writer has thought it best to tabulate them under the following groups:

1. Removal of tonsils as a therapeutic measure for hyperplasia of the cervical glands.
2. Removal of tonsils as a therapeutic measure for frequent attacks of tonsillitis and peritonsillar abscess.
3. Removal of tonsils as a therapeutic measure for various arthritic conditions, including infections, arthritis, rheumatic arthritis, myalgia or myositis and acute rheumatic fever.
4. Removal of the tonsils as a therapeutic measure for chorea and nephritis.
5. Removal of the tonsils where they are considered the source of infection in other systemic diseases, secondary to a focal infection.
6. The indications and contra-indications for tonsillectomy.
7. Post-operative complications of tonsillectomy.

This report is based on the study of 1,063 tonsillectomies, every case operated by the writer since October 26, 1916, when this method was adopted. The post-operative data was obtained through the courtesy of the physicians referring the patients and by letters from the patients themselves, but chiefly by personal examination. The writer believes it very important to see all cases from five to eight days after the operation, for it is at this period of the treatment, as suggested by Dr. McCleary several years ago, that singers and public speakers should have special attention. A few treatments at this time will prevent a fusing of the pillars, which frequently occurs regardless of the method used. Whenever possible the writer requests an examination one month after the operation, and annually thereafter, particularly in rheumatic and arthritic cases, or in cases

*(Dec'd.) Read at the meeting of the O., O. and L. Society, Asbury Park, N. J., June, 1919, by the Secretary.

that have had a tonsillectomy as a therapeutic measure for general systemic disorders.

It is interesting to note how infrequently there is a recurrence of rheumatic fever, arthritic or renal symptoms in such patients after they have had their upper air-passages put in good condition.

On account of the large number of nose and throat cases treated in the out-patient department of the hospital, and by our small staff, especially through the period of the war, the records are not as complete as the writer wishes, for it is often difficult to obtain post-operative notes and examinations of these patients.

I. CERVICAL GLANDS GROUP.

The lymphatic drainage of the tonsil is well described by Wood. The tonsil gland is one of the group of deep cervical glands lying just beneath the anterior border of the sterno-mastoid muscle. It is external and slightly anterior to the internal jugular vein. When enlarged it is outward and forward, presenting at the middle of the inferior maxillary.

There are two methods by which the lymph glands may become infected; either by a thrombosis of the afferent lymph-vessels or, the most common way, through the efferent lymph-stream.

The arrangement of the lymphatic glands of the neck is into six groups on each side of the neck. The apex of this group of glands begins just below the tip of the mastoid bone, under the sterno-mastoid muscle. One chain extends down the neck beneath the sterno-mastoid, closely associated with the great vessels. The other group follows the posterior border of the sterno-mastoid, thus forming a continuous line of lymphatics from the nose, mouth and tonsils to the apex of the lungs.

In tuberculosis of the glands of the neck, we usually find both the anterior and posterior groups involved. The writer regrets having had only a small number of these tonsils examined for tuberculosis. Mitchell, of Edinburgh, has published some interesting observations on primary tuberculosis of the faucial tonsils, obtained from children with tuberculosis of the upper cervical lymph nodes and from children with enlarged tonsils only—and without evidence of tuberculosis of the cervical glands or elsewhere.

In the first group were 100 children and 6 adults. In no case was it found possible to determine the presence of tuberculosis before the removal and examination of the tonsils. The only symptom was the swelling of the upper cervical nodes, which in about 25% was slight and in the rest rather extensive. Microscopic examination showed 41, or 38% of the tonsils definitely tubercular. Animal inoculation in 92 cases gave 20 positive results; in 16 the bovine type of bacillus was isolated.

In the second group of 100 cases—all children with enlarged tonsils only—the cervical glands were enlarged in all of them. On microscopic examination 9 of these tonsils were tubercular, all nine giving positive results on inoculation. The type of bacilli was four bovine, two human and three undetermined.

Nicoll estimated that 80% of the enlarged glands of the neck in the children of Glasgow are due to tuberculosis. This estimate is probably high.

2. REMOVAL OF THE TONSILS AS A THERAPEUTIC MEASURE FOR FREQUENT ATTACKS OF TONSILLITIS AND PERITONSILLAR ABSCESS.

Recurrent tonsillitis and peritonsillar abscess are good reasons for tonsillectomy, especially where the tonsils show an increase of fibrous tissue, adhesion between the tonsils and pillars, or other evidences of inflammatory reaction, often with enlargement of the deep cervical glands at the angle of the jaw.

3. ARTHRITIS GROUP.

This group may be classified into,

- (a) Acute rheumatic fever.
- (b) Infectious arthritis.
- (c) Rheumatoid arthritis.
- (d) Myalgia or myositis.

(a) Acute rheumatic fever with temperature of 102° to 105° , often with heart lesion of endocarditis or myocarditis. Recovery, as a rule, excepting those with the heart complication, which often remains unimproved.

The object in operating in such cases is not on account of joint trouble, but to try to prevent a recurrence of arthritis or endocarditis. Of 9 cases operated, none has yet had a recurrence.

(b) Tonsillectomy in infectious arthritis when due to diseased tonsils often surprises us with the most brilliant results, for in 28 cases operated in this series, 22 record complete cures, 4 much improved and 2 (one of which was operated one month ago) not improved. In some (3) the joints were sore for several days after the operation; others claimed to notice relief at once following the operation.

(c) Rheumatoid arthritis is the class less likely to be benefited by tonsillectomy, as the process is progressive and tends to ankylosis of many of the joints. These cases are usually free from endocarditis. Of three cases operated only one was improved.

(d) Myalgia or myositis. This is an actual inflammatory process in the muscles, with tenderness, pain on motion and stiffness. Of six cases operated five are completely relieved, and one operated three months ago, improved.

4. CHOREA AND NEPHRITIS GROUPS.

Of the former only three patients have been traced; one of them had a recurrence,—one year after the operation. The nephritis most likely to come from diseased tonsils is the glomerular-nephritis and believed to be due to infection with the streptococci.

Of three cases operated classed as acute nephritis following acute tonsillitis, all trace of kidney lesion disappeared.

5. THE INDICATIONS AND CONTRA-INDICATIONS FOR TONSILLECTOMY.

The indications for tonsillectomy are:

- (a) Frequent attacks of tonsillitis or quinsy.
- (b) A recurrence of chronic catarrhal suppuration, otitis media or eustachian tube infection.
- (c) A chronic laryngitis or bronchitis may be benefited by a tonsillectomy.
- (d) Reflex neurosis in children such as asthma, severe nocturnal attacks of coughing and enuresis.
- (e) Carcinomas are best treated by early operation, while sarcoma responds usually to radium treatment.
- (f) Hyperplasia of the tonsils causing swelling, difficulty in breathing, or articulation.

(g) Hyperplasia of the glands at the angle of the jaw, which is an indication of chronic tonsil infection.

(h) Tuberculous cervical adenitis;—the most of these cases are best treated by putting the nose and throat into normal condition.

(i) General systemic disorders secondary to a focus of infection in the tonsils, as,

1. Infectious arthritis.
2. Early stages of nephritis.
3. Myalgia, myositis or neurasthenia.

(j) For prophylactic measures in acute rheumatic fever and heart lesions, it is often best to remove the tonsils to prevent further cardiac lesions that may result from an acute tonsillitis; also in arterio-sclerosis and chronic nephritis, if they give a history of repeated attacks of tonsillitis.

The contra-indications for tonsillectomy are:

(a) A tonsillectomy should not be done during acute tonsillitis or for at least two weeks after all symptoms have subsided.

(b) Tonsillectomy should not be performed closely following any acute purulent infection, as of middle-ear or nasal sinus. Reports show that such cases have developed abscess of the lung or septicemia.

6. THE OPERATIVE AND THE POST-OPERATIVE COMPLICATIONS OF TONSILLECTOMY.

A description of this operation was given before this Society by the writer two years ago. Ether was used in about 85%; novocain for a local anesthetic. The patients remain in bed or in their room one or two days after the operation.

Post operative complications:

The following table indicates all the post-operative complications in the 1,063 tonsillectomies on which this paper is based:

Cases.

1. Fatalities	0
2. Acute otitis media (children's cases)	5
3. Post-operative pneumonia	0
4. Acute laryngitis	2
5. Lung abscess	0

A STUDY OF 1,000 TONSILLECTOMIES.

6. General septicemia	0
7. Bleeding from naso-pharynx	1
8. Troublesome bleeding during operation	2
9. Bleeding after patient removed to ward	0
10. Secondary hemorrhage	0

DISCUSSION.

J. IVIMEY DOWLING, Albany, N. Y.: There is one point in that paper which seems to me should be more generally recognized by men in general practice, viz.—the possibility of a tonsil infection being associated with cervical enlargement of the glands. So often you see these cases, where patients are allowed to go on with the idea that they are tubercular, and tonsils left alone until, often, the cervical glands may be suppurating. The procedure I have adopted in the treatment of cervical adenitis is,—first enucleate the tonsils and remove adenoids; then after a reasonable period, if the glands are still evident, remove them by appropriate surgery. The removal of adenoids and tonsils will oftentimes avert surgical interference for adenitis.

A. B. CLAPP, Muscatine, Iowa: I rise not to discuss the paper so much as a recognition of Dr. Jones's work in tonsillectomy. Anyone who has observed Dr. Jones' technic will admit that it was little short of wonderful. He was past-master in the manipulation of the submerged variety of tonsil by LaForce's instrument, which is difficult. I also observed that in his corrective work in the care of public speakers and singers he got very little cicatricial contraction, which is a great feature in this line of cases.

THE PRESIDENT: This very able paper merely emphasizes the loss that we have sustained in having Dr. Jones go from our midst, not only in his ability to present a paper like this, but in the demonstrations he has made before this Society of the LaForce technic, especially in the submerged type of tonsil.

AN UNUSUAL CASE OF MYOPIA.*

J. W. STITZEL, M. D.,

Hollidaysburg, Pa.

ON July 20, 1917, Mrs. R. C., age 42 years, called at my office to have her eyes examined and glasses changed. She claimed to have worn her present correction for the past ten years, but noticed she had not seen so well out of the left eye for the last year or so.

On inspection, I found she was wearing — 20.00 D. S. in each eye. Testing her with the glasses she was wearing, I found she could read three letters in the 20/25 line with her right eye, but the left eye tested only 15/200.

After using homatropin and testing her carefully, both at the test-card and with the retinoscope, I found vision in the right eye could not be improved by any change of lens; but was surprised to find that with — 25.00 D. S. before the left eye, she could read 20/30. I looked her over carefully with the ophthalmoscope and found she had remarkably few changes in the retina of either eye.

I consider this an unusual case of myopia, and one of sufficient interest to bring before this Society; for in an experience of twenty years I have never seen a case of such a high degree of myopia with so few retinal changes and so good vision as this case.

It has been my experience, and I feel sure the same is true of other members of this Society, that when you go above 12.00 or 13.00 diopetrs of myopia, vision is not often better than 20/50 or 20/40 at the best, and is often much less. Yet here is a case of a vision of 20/30 with — 25.00 D. S. Of course, you all know the strongest lens in the average test-case is only 20.00 dioptries.

In looking over a number of price-lists from manufacturing opticians, I could not find a lens listed 20.00 dioptries in any of them. Hence, they certainly have very little demand for 25.00 dioptries.

I have reported this case more particularly to see how many

*Read at the meeting of the O., O. and L. Society, Asbury Park, N. J., June, 1919.

members of this Society have seen cases with such a high degree of myopia with correspondingly good vision. As for myself, with an experience of over one thousand refraction cases annually, I have not seen a single case of myopia with so good vision with a lens above 13.00 dioptries.

ABSTRACTS.

Correction of Diseases of the Nose and Throat was of considerable aid in eliminating the meningococcus from carriers. Difficulty in disinfecting carriers led the Rockefeller staff while seeking the cause to come to this conclusion. There was among soldier carriers who were stubbornly resistant to treatment a high percentage of abnormalities in the nose and throat.—Babcock, *Laryngoscope*, Vol. 29, No. 8.—D. M.

Influenza in Children.—C. S. Raue, *Jour. Amer. Inst. Hom.*, January, 1920, reports that the epidemic of 1918 was in most respects similar to the previous epidemics, with but few exceptions. Children were not frequently attacked, and when attacked they stood the disease better than adults. There were surely certain cases of genuine lobar pneumonia that were diagnosed as influenza.

Broncho-pneumonia was the most frequent and fatal of the complications. In the treatment of influenza the indicated homœopathic remedy proved itself far superior to any specific or physiological treatment.—D. M.

The Homœopathic Medical Society of the State of New York will hold its annual meeting at the Hotel Ten Eyck, Albany, N. Y., April 13th and 14th, 1920. The Legislative Committee of the Society is conducting active propaganda to prevent the passage of the compulsory health insurance bill. Dr. R. M. Jones, representing the New York Ophthalmic Hospital, will present a paper on "Syphilitic Conditions of the Nose and Throat.—D. M.

Journal of Ophthalmology Otology and Laryngology

Vol. XXIV

MAY, 1920

No. 5

Editorial

MEMBERS OF THE HOMEOPATHIC O., O. AND L. SOCIETY.

FOLLOWING this announcement will be found a preliminary program of papers for the June meeting. The list includes the names of many of the very best men in our school. There will be many other papers besides these, but sufficient are given to assure you of a successful meeting, one well worth your time to attend.

The success of any meeting always depends upon what YOU put into it. Are YOU on the program? If not, kindly notify the Bureau Chairman or the Secretary IMMEDIATELY what you will contribute. If you can't write a paper, give us a good, snappy case report.

BUT DO NOT FAIL,

to be on hand at the meeting in Cleveland, Hotel Statler, June 21-24.

REMEMBER

A new applicant from each member of the Society.

DON'T FORGET—DO IT NOW.

NEIL BENTLEY,

Secretary.

EYE.

Non-Metallic Foreign Bodies in the Vitreous Chamber. Wm. M. Muncy, Providence, R. I

Report of a Case of Retinal Detachment. Wm. H. Phillips, Cleveland, Ohio.

The Help of Plus Smoke Lenses in Augmenting the Effects of Atropin in Cycloplegia. H. W. Champlin, Towanda, Pa.

Report of a Case of a Pin In An Eye for Four Months. D. W. Weaver, Greensburg, Ind.

EDITORIAL.

The Care of the Eyes of the Aged. Henry L. Gowens, Philadelphia, Pa.

Report of a Case of Optic Neuritis with Choked Disc, with Complete Relief from Ethmoidal Operation. Dean W. Myers, Ann Arbor, Mich.

✓ Cataracts of the Juvenile Variety, Operated According to the Method of Dr. J. Ivimey Dowling. De Wayne Hallett, New York.

Ocular Muscle and Fusion Testing. G. A. Suffa, Boston, Mass.

Physiological Considerations in Refraction. I. D. Metzger, Pittsburgh, Pa.

The Ethmoid Area. Grant S. Peck, Denver, Colo.

S. B. MOON,
Bureau Chairman.

NOSE AND THROAT.

1. Modern Conception of So-called Bronchial Asthma. Burton Haseltine, Chicago, Ill.

2. Sinus Surgery as Applied to the Eyes and General Health, and Lantern Slides Showing Some Pictures of Original Sinus and Other Work Along These Lines. J. Ivimey Dowling, Albany, N. Y.

Synopsis.

Anatomical Résumé:

Glaucoma from viewpoint of rhinologist.

Studies in epilepsy.

Original suggestions for frontal and maxillary sinus surgery.

3. Functional Ethmoiditis (especially local nasal manifestation of pelvic and allied disorders). Harold A. Foster, New York.

4. Some of the Probable Physical and Chemical Forces Active in the Production of Enlarged Tonsils. J. A. Ferree, Columbus, O.

Explanatory or Introductory Statement of Paper Contents:

An Attempt to show the probable relation of "surface tension" on the *modus operandi* in tonsillar enlargement from extraneous influences, as bacteria, etc.

5. Cataracts of the Juvenile Variety. De Wayne Hallett, New York.

6. The Acute Laryngitis of Actors and Singers. Thomas L. Shearer, Baltimore, Md.

7. The Treatment of Naso-Pharyngeal Catarrh. Fred. C. Sage, Waterloo, Ia.

Synopsis.

Definition :

The affection is very common, as evidenced both by our experience and by the number of millionaires who have grown opulent exploiting some proprietary catarrh cream, balm, jelly, or internal alcoholic nostrum. The disease is a most annoying one locally and esthetically, but more than this it furnishes a splendid index of one's physical condition and natural resistance to diseases in general. All organs should properly function. All obstructions should be removed. Last—local and general treatment.

8. Case Reports Illustrative of Beneficial Results of Nose and Throat Operations in Some Cases of Headaches, Exophthalmic Goiter, Atrophic Rhinitis, Hay Fever and Tic Douloureux. M. W. Conrow, Springfield, Mass.

Synopsis.

Three cases of atrophic rhinitis greatly improved by septum resection to equalize the air column of the two sides. Two cases of autumnal hay-fever in which by septal resections "short circuit" points of near contact were removed, with virtual cure in one case and 90% improvement in the other. Two cases of one sided headache, continuous, due to obstruction with pressure, promptly cured by removal of the obstructions. Two cases of exophthalmic goiter greatly improved as to heart and nervous symptoms, in one case by tonsillectomy and in the other by septum resection and curettement of the ethmoid cells. Finally a case of genuine tic douloureux in a man with tabes promptly relieved and now apparently cured by removal of polyp and cells from the anterior ethmoid of the affected side.

J. R. McCLEARY,
Bureau Chairman.

Ear. (Additional paper.)

Roentgenology of the Mastoid in Health and Disease, with Lantern Demonstration. Walter C. Barker, Philadelphia, Pa.

L. E. HETRICK, *Bureau Chairman.*

EDITORIAL.

MEDICAL ECONOMICS.

The subject will be opened with a brief paper by the chairman, after which various phases of the subject will be given informally by different members of the Society. Following this the subject will be thrown open for general discussion in which every one will be asked to participate.

IRA O. DENMAN,
Bureau Chairman.

N. B.—SPECIAL ATTRACTION FOR OUR MEETING.

1161 David Whitney Building, Detroit, Mich.,

March 30, 1920.

Dear Doctor Mackenzie:—

Enclosed please find titles of six papers from Dr. Moon's Eye Bureau, and the titles from Dr. McCleary's Bureau on Nose and Throat. In addition, Dr. Denman will have a Bureau on Medical Economics that will tell us how to double our income while halving our work. We are trying to arrange a clinic for Thursday morning, but I cannot yet definitely promise it. On Wednesday afternoon the Institute wishes us to meet with them.

One afternoon Mr. Kittering, of Dayton, Ohio, one of the best electrical engineers in the United States, a man who is second only to Edison, is going to give a talk on the electrical theory as applied to homeopathy. He is a splendid speaker, a very learned man, and no one should miss this. This will be followed by a talk by President Thompson, of the University of Ohio, along scientific lines, too, and then the program of the Bureau of Science and Clinical Research which will dovetail in with these is to take up the rest of the afternoon, and we are going to invite the public generally to attend this afternoon session.

Very sincerely,

(Signed) NEIL BENTLEY.

THE NARCOTIC DRUG PROBLEM.

(By Ernest S. Bishop, M. D., F. A. C. P.)

Appearing at this time Dr. Bishop's book, which epitomizes his vast experience in the treatment of drug addicts, has an added value

by reason of the operation of the Harrison Law aimed to suppress the illicit trade in habit-forming drugs.

The hope of the profession as well as the lawmakers lay in lessening the number of addicts for the future. The restriction that the lawmakers have placed upon the medical profession is due largely to the lack of education, and indifference, on the part of the average physician in the past about the subject of drug-addiction.

Before prescribing a habit-forming drug in case of sickness it is incumbent on the physician that he possess as thorough a knowledge as it is possible to obtain of its indications, contraindications, limitations and dangers, especially regarding its habit-forming properties.

What the vast majority of us do not know about the subject of drug-addiction is contained in this excellent book prepared by Dr. Bishop, and it behooves those of us who may feel inclined to prescribe one of these drugs for its physiologic effect to more than glance over what the author has to say on the subject of addiction. To him who believes he has never seen any indications for the use of narcotics and has no use for such drugs at any time, it is well that he study the subject carefully for the reason that he is just as likely to come across an addict for a patient as anyone else, and the treatment of the case is up to him, to do with according to his own best judgment; and unless he has given especial study to the subject his judgment may be faulty, as witnessed by numerous sad experiences cited in the literature.

When a case is presented the physician has the option of doing one of two things: referring the case to someone else who possesses a wider knowledge of the subject than he does himself, or retaining it and treating it as his own. In the latter instance he can choose one of two courses, either to treat the case according to the knowledge he has, which is generally quite limited, or to treat it according to the knowledge and advice of someone more skilled. This knowledge and advice can nowhere be better obtained than through a careful study of the contents of Dr. Bishop's book. This suggestion is offered after having read the book myself.

The publishers are Macmillan & Company, New York, and the price is one dollar and a half.

G. W. M.

QUESTIONNAIRE ON INDUSTRIAL MEDICINE.

1. How does an industrial physician differ from a contract doctor?
2. Upon what remunerative basis should industrial medicine be placed as between industry and the medical profession?
3. What are the advantages of the industrial physician to the public?
4. What are the disadvantages of the industrial physician to the public?
5. What are the disadvantages of the industrial physician to the medical profession?
6. What are the advantages?
7. Should industrial medicine be a part of the curriculum of our medical colleges?
8. Should there be a bureau of industrial medicine in the American Institute of Homœopathy?

The Committee would appreciate it very much if the readers of the JOURNAL would send answers to the above questions to Dr. Claude A. Burrett, Ohio State University, Columbus Ohio.

The President of the O., O. and L. Society, Dr. William McLean, together with Dr. William H. Phillips, is planning to give the Society a clinic at Ohio State University, Columbus, under the management of Dr. Ferree. Dr. Ferree advises us that he can have a very fair clinic. Members of the O., O. and L. Society should bear this in mind and make their plans accordingly.

NOTICE TO CONTRIBUTORS: In sending in manuscripts of papers to be published in the JOURNAL the editor requests that they be neatly typewritten, double-spaced, and with at least one-and-a-half inch margin on each side.

A NEW OPERATION FOR SOFT CATARACTS.*

J. IVIMEY DOWLING, M. D., F. A. C. S.,

Albany, N. Y.

SURGEONS have been chiefly interested in and have studied various methods for the removal of senile cataracts, they probably being less concerned with soft cataracts because of their relatively less frequency.

The ancients favored depression, which method was in vogue until the middle of the eighteenth century. From that time surgeons became more and more interested in extraction, and many primary incisions were devised and preliminary iridectomy was discussed pro and con, so that even in this day this particular step in the operation for senile cataract has both its advocates and they who disparage the step.

Recent years have witnessed the generally increasing popularization of the *extraction in capsula*, as devised by Major Smith, of India. By this method it is possible to extract all varieties of operable cataracts, but its technique is difficult to acquire and its employment in children complicated because of the use of general anæsthesia necessary at this age.

Therefore, when dealing with children a simpler method is advisable, and the accepted procedure is discission, or needling, which must be repeated at least twice and often many times before accomplishing satisfactory results.

The complications following discission are so positive and at times of such severity that a more radical and less uncertain method seemed to me necessary.

During a period of special practice, extending since 1899, I have gradually evolved a method of operating these cataracts in children, and the traumatic cataracts of young adults, which I be-

*Read at the meeting of the O., O. and L. Society, Asbury Park, N. J., June, 1919.

lieve is a positive step toward the accomplishment of a more definite and satisfactory operation.

Since this paper is merely an effort to describe a somewhat new procedure it is not essential to refer to the various operations—aside from discission, which have been attempted. It is sufficient merely to state that in addition to discission, attempts have been made from time to time to remove this variety of cataract by suction with an aspiration apparatus. Callan, in his article on soft cataracts, as published in Casey A. Wood's "Ophthalmic Operations," states that the dangers following the operation are similar to those attendant upon discission, and call for the same precautions and treatment.

The operation which I have devised, and which I now wish to report, has been successfully used in young children and young adults with a very satisfactory restoration of corrected vision, varying from 20/70 to 20/20.

A description of the operation as I perform it is as follows:

The instruments necessary for the purpose are:

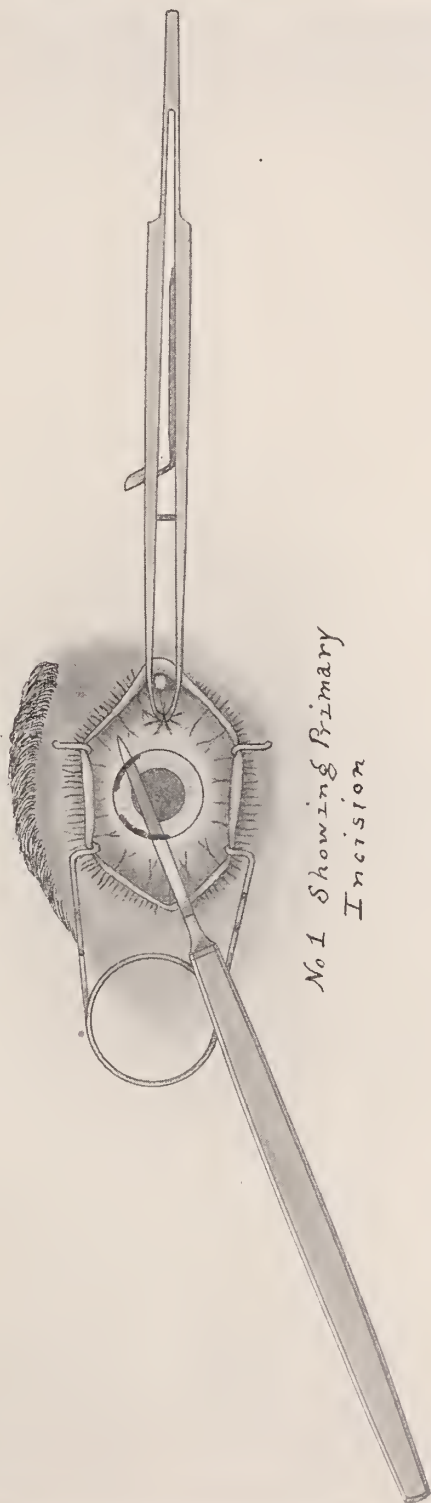
1. Eye Speculum.
2. Fixation Forceps.
3. Graefe Cataract Knife.
4. Capsulotome, or Knapp's Knife Needle.
5. Grooved Spatula.
6. Barrel Syringe with straight tip.

The technique and the description apply to the right eye. Of course, with the left eye the operator must either make use of his left hand or else sit in front of the patient.

Previous to operation the pupil is dilated with homatropin.

After having placed the speculum, the eyeball is grasped with the fixation forceps at the nasal side. The incision is made with a thin Graefe knife, which is introduced at the outer side of the corneo-scleral margin, entering at a point one or two millimeters below the meridian of the eyeball, carrying the blade of the knife through aqueous chamber and making the exit at a point one or two millimeters above the meridian of the eyeball.

The incision is then further extended by backward and forward motion of the knife blade, exerting a slight extra pressure toward the handle of the knife. In this way the incision is carried upward,



No 1 Showing Primary
Incision

DRAWING BY BERNARD GRIER A.A.
ALBANY, N.Y.

making a broad incision at the temporal side and an incision about two-thirds its length at the nasal side, leaving a broad corneal bridge between the two incisions.

The Graefe knife is now withdrawn and the second step of the operation proceeded with. This consists of making an extensive capsulotomy, either with a capsulotome or a Knapp's knife needle. The incision is vertical and extends from the upper to the lower parts of the lens, entering the point of the knife behind the edge of the iris. This permits a free escape of the soft lens substance, which oftentimes appears in flocculent masses.

The third step of the operation now requires attention. The fixation forceps is removed and the grooved spatula is introduced through the incision at the nasal side, entering only far enough to separate the lips of the wound and to permit an escape of fluid.

Through the incision at the temporal side the straight tip of a small barrel-syringe is now introduced. The tip is carried through the opening of the lens-capsule, projected downward and passed beneath the iris. Gentle but firm syringing is now employed, exerting sufficient force to break up the lens substance and wash it from beneath the angle of the iris.

The tip of the syringe is now moved to various positions below, to the nasal side and above. Having flushed with the contents of one syringe, the tip is then removed, the barrel refilled a second or third or more times until the lens substance is washed out and the pupil thoroughly black. The angle beneath the iris is thoroughly cleansed of all lens substance throughout its circumference because of the backward flow of the solution, which breaks up the matter beneath the iris at the temporal side and washes it out of the larger incision. The smaller incision acts as a vent, permitting the clearer watery substance to escape and thereby avoiding injury to delicate parts.

The lens substance in escaping through the larger incision frequently carries with it a large portion of the iris, but this need not be considered until the final toilet of the operation is to be performed.

Having determined that there is no more lens substance to be removed, the spatula should be withdrawn from the nasal incision and the syringe from the temporal incision. Then the iris is replaced by gently inserting the spatula through the larger temporal

incision. Having replaced the prolapsed iris, the corneal circumference is now gently stroked until the pupil assumes a normal roundness.

Finally, a drop of eserin solution is instilled in the eye and the eye bandaged, or a light dressing applied.

The only complication which I have ever witnessed following this operation is a fairly positive degree of iritis with a tendency to adhesions. However, this is easily avoided by instilling a 1% solution of atropin about ten or twelve hours subsequent to the operation. At that time the wounds are adherent and except for iritis there is little likelihood of any complication.

If the syringing has not been sufficiently thorough, at the expiration of twenty-four hours the pupil, instead of being black, will show a cloudiness of varying degree. This, however, is readily overcome by the repeated use of atropin and a 2% solution of dionin.

To one unfamiliar with the operation it might appear that the forcible syringing beneath the angle of the iris would prove disastrous, but, on the contrary, it only serves to dislodge the substances which, if left, are the actual cause of the varying degrees of iritis, or the more severe inflammations subsequent to cataract operations.

To be successful in this operation one must be radical only to the point of being thorough.

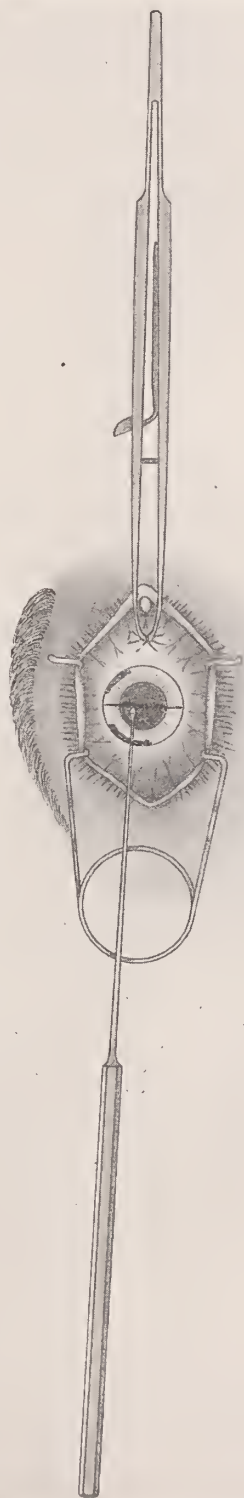
Trial of the operation will convince surgeons of its merit, and it is very possible that additional experience on the part of others will tend to improve the technique and add to the usefulness of this method in general.

116 Washington Avenue

DISCUSSION.

RALPH I. LLOYD, Brooklyn, N. Y.: I would ask whether the syringe point goes through the incision into the lens capsule, or anterior to the capsule?

DR. DOWLING: The canula passes through the capsular wound and the lens substance is then broken up with the tip, before you syringe. The lens substance is deposited in flocculent masses in the aqueous chamber, and is then washed out through the capsulotomy wound.



No 2.- Showing Primary
Incision of Cystotomy

Drawing By BERNARD GAZIER, A.A.
ALBANY, N.Y.

A NEW OPERATION FOR SOFT CATARACTS.

PRESIDENT: You remove the entire lens substance with the syringe in that one position, Dr. Dowling?

DR. DOWLING: Yes. Curiously enough this vertical capsulotomy wound seems to be sufficient without making cross.

PRESIDENT: Is there danger of making too much flow from the syringe?

DR. DOWLING: In the hands of some, yes. I never have.

G. A. SUFFA, Boston, Mass.: At what age have you operated on these cases?

DR. DOWLING: The youngest was a little colored boy, ten years old, and the oldest twenty-five.

G. A. SUFFA: What was the relative amount of cortical substance, or lens substance remaining in the two cases?

DR. DOWLING: Difficult to compare. Lens substance broke up readily and black pupil resulted in all cases primarily. In a few cases 24 hours after operation a very thin film appeared in the pupillary area, but this disappeared very soon without the need of secondary operation.

G. A. SUFFA: At a young age I question the necessity of syringing since absorption is active. In the ordinary cataract extraction I formerly used the syringe to remove the cortex. I found quite often an iritis following and I now prefer to coax out as much cortex as possible and push the rest, visible and invisible, into the pupillary space where it is readily absorbed.

DR. DOWLING: As far as its being applicable to any sort of cataract I really think that if the operation is done there is little danger of sequelæ, because the iritis results from what is left behind and not what is removed. The lens-capsule in this variety of cataract is very thin and thus far I have not had to do any secondary needling, although it is possible I may have to. I do not consider my technique a finality at all, but I do think it is an improvement over present methods. The artist has not grasped the idea of the canula. The diameter of your canula must be at least a millimeter.

DE WAYNE HALLETT, New York, N. Y.: I regard this as a very interesting subject. It is novel and it fulfills a requirement in the removal of opaque lens material as quickly and completely as possi-

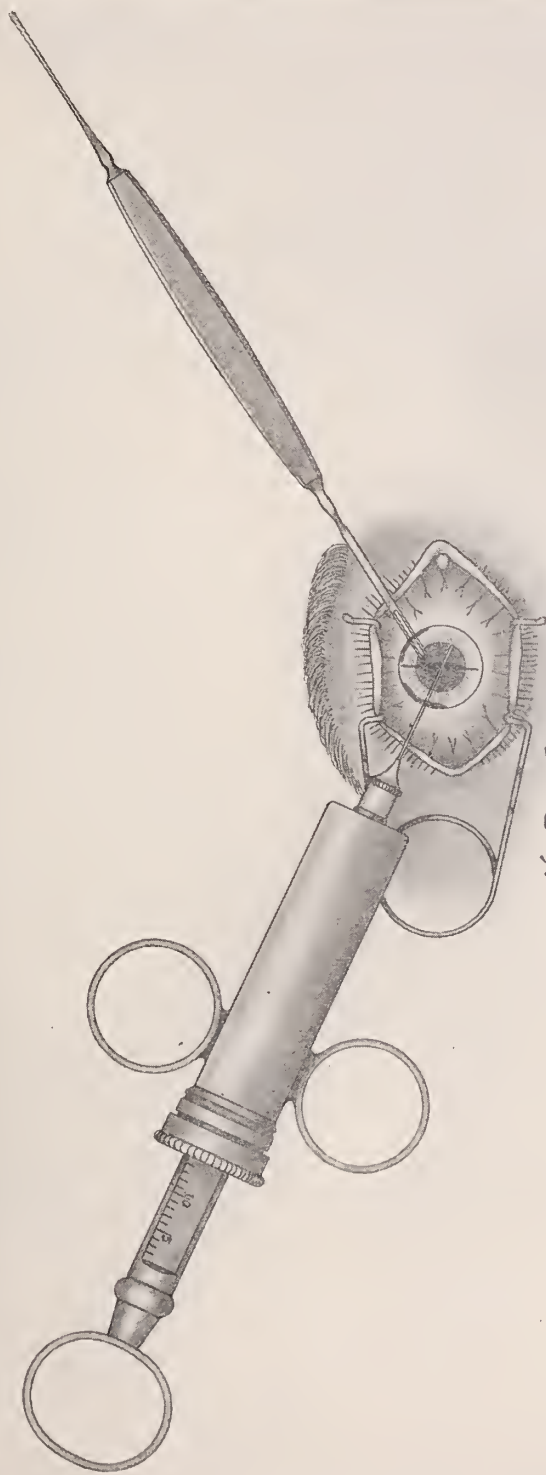
ble, since it is the swelling and the retention of the lens substance that leads to iritis by irritation, and to various complications, such as secondary glaucoma. Much discretion as to the amount of force and just where it may be applied must be required. It looks very favorable to me by reason of the fact that you get rid of nearly all your broken down lens substance at the time of operation.

JOSEPH E. STERNBERG, Boston, Mass.: Does Dr. Dowling think his method is an improvement on the straight linear extraction where the keratome can be used?

I cannot see where this method is an improvement over the ordinary linear extraction, where the incision is made with the keratome and the contents expressed. The introduction of so many instruments as used by Dr. Dowling is in my mind not only dangerous but drastic. The Boston men in most cases use the linear extraction.

DR. DOWLING: I consider the operation much superior to the method referred to by Dr. Sternberg and to be preferred to the needling operation. The method may be drastic, but not dangerous, if the operation is performed skillfully and the instruments handled with delicacy. In this particular operation it is necessary to use the Graefe knife because you make a counter-puncture. In directing your stream of water you do not fill the aqueous chamber with more than it can contain because of the counter opening, therefore, there will be no intraocular pressure at the time you use your syringe. Now in regard to the incision, so far as I know the idea of entering the Graefe knife below the horizontal margin and emerging above the horizontal margin leaving a bridge of uncut tissue between the two incisions, is an original idea.

RALPH I. LLOYD, Brooklyn, N. Y.: There are a few points I would suggest; first, whether there had been any comparison with the so-called "curettage of the lens," using a Daviel spoon to encourage the soft tissue to pass out, the advantage being the lesser degree of traumatism; and whether Dr. Dowling had encountered a solid nucleus in breaking up these lenses. Very recently such a case did come to my hands. In fact, I observed my good friend, Dr. Hallett, doing a needling and switching to Graefe's incision to remove a large nucleus in a young adult. It would seem to me the



No 3. Showing Third
Step - Washing of
Lens Substance

DRAWING BY BERNARD GAZIER, A.A.
ALBANY, N.Y.

nucleus might stick in one chunk. Has that contingency ever come up?

DR. DOWLING: I have never witnessed it, but it is very possible it might happen, but if it did I would enlarge the incision, put in a spoon and take it out.

A. B. CLAPP, Muscatine, Iowa: Would there be any advantage in having outlets along the tube for the flushing, instead of having an outlet on the end?

DR. DOWLING: That would be one of the things that those who undertake to do this operation would work with. I think it would be an advantage. You see we do not have the thing absolutely perfected.

C. LESLIE RUMSEY, Baltimore, Md.: Would the cross-incision give less traumatism? The ends of the capsule would roll in and give a black pupil and I should think the other side would allow the escape of the material just as well as if you made one incision.

DR. DOWLING: I used to make a cross-incision. I found that I got better result from making a vertical incision through the lens capsule.

C. LESLIE RUMSEY: You do not have any proliferation of epithelium?

DR. DOWLING: No.

FOR SALE.—New Braun tonsil snaretome. First check for \$30.00 buys it.

A. B. CLAPP, M. D.,
Muscatine, Iowa.

REFRACTION UNDER PROLONGED FOGGING COMBINED WITH A MINIMUM OF DRUG CYCLOPLEGICS.*

HENRY W. CHAMPLIN, M. D.,

Towanda, Pa.

IN a personal interview one of our members expressed his doubt of the value of a method of refraction practiced by me for some years—that of rather prolonged fogging by means of refractive (plus) smoke-tint lenses combined with a minimum of drug cycloplegics; and by inquiry among the optical houses I am led to believe that this practice is not in vogue with the eye-men. A brief note describing this procedure appeared in our JOURNAL a few years ago, but it caused no comment to my knowledge. To me, after ten years' experience with it, it seems to be an improvement over the methods commonly followed, and yet perhaps not adopted by any other practitioner. This is my apologia.

My first thought in having a series of plus smoke-tint lenses made was their utility in holding back the accommodation until the prescribed lenses could be put on the eyes. The advantage of this is evident; and as these lenses are at hand to use from the moment of the first instillation of the cycloplegic, it has been a matter of observation that cycloplegia was promoted thereby.

In detail my procedure is about as follows: After the preliminary examination during the morning hours, atropin is instilled, smoke-tint lenses of a refractive power somewhat greater than the manifest hyperopia applied, and the patient goes out to lunch or look about the town. In the early afternoon another instillation of atropin is made, or two or three instillations of homatropin, and stronger plus lenses applied. One or two hours later the refraction is completed by means of the retinoscope and test lenses. This is the sched-

*Read at the meeting of the O., O. and L. Society, Asbury Park, N. J. June, 1920.

ule for out-of-town patients who must have the work completed at one visit; and this constitutes the major portion of my refraction work. Those who are similarly situated may be interested in my procedure; others with shorter office hours and patients who can conveniently present themselves two or three days later will not be so much concerned with my method of crowding the cycloplegia. No doubt the latter predominate in this Society, but there are a great many medical refractionists throughout the country situated as I am, who must do the best they can for their patients at one visit. I am convinced that we can do dependable work in this limited time by the use of drug cycloplegics reinforced by several hours' fogging with strong plus smoke-tint lenses. When in any case it is not permissible or advisable to use atropin, I find that the action of homatropin is augmented by a few hours' use of the strong plus lenses, and so used enables us to do a dependable one-day's refraction. To accomplish this the retinoscope must not be neglected, the use of which is facilitated by our method of cycloplegia. It is rare in my experience for the retinoscope to reveal anything dependable without dilating the pupil and relaxing the accommodation, but I do not believe that it is essential to have complete cycloplegia to get correct results with this mode of refraction. Hence, if you claim that I do not get complete relaxation of accommodation by my method, I shall claim that we ought to get perfect results.

To take a typical case from my records I quote the following: Mary B., age 10. Headache and asthenopia. $V = 20/40$ o. u. Reads by preference at eight inches. Accepts 0.50 cylinders—preferably minus. Esophoria 8° . Retinoscopic examination indifferent. At 11:30 applied atropin and $+ 2.00$ smoke-tint lenses, with instructions to call at 1:30 p. m. At the latter time another instillation of belladonna is made; and it is noticed that she hurries to get the dark glasses on so that she can see. She is now detained in a room with subdued light, and requested not to look at anything near at hand. At 2:30 she reads at thirteen inches with $+ 5.00$ sphere. The retinoscope shows the need of $+ 1.75$ spheres combined with $+ 0.62$ cylinders; and the test lenses confirm this strongly. She is to continue the use of the plus smoke-tint lenses until she gets the new ones two or three days later.

Another case: Miss Mabel S., age 24. Lives twenty-five miles out. has been wearing — 0.25 D cyl. ax. 180° o. u. for ten years. Asthenopia and headache. V \subset 20/20 o. u. One application of atropin and two of homatropin with + .75 smoke lenses during two hours. Result: R. R. E. + 0.75 D. sph. \subset + 0.37 D. cyl. ax. 90° ; L. E. + 0.75 D. sph.

A fairly illustrative case: Agnes C., age 31. Wearing + .75 spheres from a medical refractionist. Eyes accept + 0.50 D. sph. \subset + 0.37 D. cyl. o. u. (Manifest defect.) Atropin rejected. Homatropin and + 0.75 smoke lenses applied two hours. Result: R. R. E. + 2.00 D. sph. \subset + 0.50 D. cyl. ax. 90° ; L. E. + 2.75 D. sph. \subset + 0.37 D. cyl. ax. 90° .

Whenever I put any of my resident patients through on this hasty schedule I ask them to call the following day to confirm the work, and I have to say that the discrepancy is negligible; though I would never omit this precaution when the call is possible. I hope to have occasion and opportunity to refract some of these cases under more prolonged cycloplegia, but in almost all instances the same reason prevails as that which prevented the more deliberate work at first examination. However, during the coming summer I hope to re-examine some of the pupils from the schools under more prolonged cycloplegia, when I may have something of interest to report.

In my preliminary examinations I am as painstaking as if my prescriptions were to depend upon them. I am usually quite sure of my cylinders, and I endeavor to bring out all of the hyperopia possible; these data being given weighty consideration along with the results of the refraction under cycloplegia. Only by so doing can we safely make our prescription the same day.

I am not arguing that the abbreviated work is the better, but it is not without its advantages. In the method described herewith you will observe that the use of the cycloplegic is not trusted to the patient or friends, who may be ignorant, uncleanly, incompetent and prejudiced, but is applied only by the doctor or his assistant. No atropin is taken to the home to be a possible source of poisoning. The time of administration is short and the quantity small, thus avoiding the profound and more prolonged effects—sometimes dan-

gerous and always objectionable in those of more mature years. The economy of using but a minimum of belladonna is a matter for consideration at the present time. And if we thus avoid the occasions for the same we shall do much to annul the opposition to the use of atropin which has been instigated by non-medical refractionists.

DISCUSSION.

C. GURNEE FELLOWS, Chicago, Ill.: This method of fogging with strong plus glasses has been discussed from time to time in the Journals and our Societies. Like any good thing it is worth repeating and the experience of anyone who uses a method conscientiously is worth listening to. We are apt to get into a routine method of practice and one of the biggest reasons for such conventions as this is that we hear how the other man works.

A few years ago, in Chicago, we had a man who made a great splurge of curing every possible disease by removing eye-strain, and his method was the fogging system, but even that was carried to an extreme that was never heard of before and perhaps never will be again. He had patients wear plus lenses two or three times the amount of their correction and even put them on at night to sleep in, which was, of course, a "*reductio ad absurdum*."

Dr. Champlin's method of assisting the fog of a short atropin application with plus glasses is certainly correct in principle, and I can see how when the refraction must be done at a single sitting it becomes a check upon the patient as well as upon the doctor. Personally, I am in favor of examining a patient two or three times at different sittings before prescribing, whenever possible. I likewise am in the habit of loaning patients plus lenses of the strength of full correction to wear while they are under atropin. This suggestion of Dr. Champlin's of combining a smoke-tint with a plus is worthy of adoption.

G. A. SUFFA, Boston, Mass.: Did you do full correction in all your cases? Did you take into consideration the muscular conditions?

DR. CHAMPLIN: Yes. If esophoria,—as strong as the patient will tolerate; if exophoria, the weaker, perhaps combined with prisms.

WM. M. MUNCY, Providence, R. I.: There is still a specialist in Boston who uses the fogging method as part of the routine; his patients wearing glasses so strong that they can hardly see across the street; having for special occasions, such as theatre or a ball game, weaker ones for temporary use. The paper is very interesting, but I wish the doctor had proved more soundly the advantage of his method. If he had taken school children and given them the cycloplegic and smoked-glass tests, then taken the same children two months later and subjected them to the regular atropin test, we would have comparisons that would be beyond dispute. Providence school children, for a number of years, have been tested under scopolamin because its primary effect is much sooner, requires but one instillation, and wears off much more quickly (3 to 4 days) than atropin. I have never felt that homatropin was at all dependable as a cycloplegic, especially with children.

J. W. STITZEL, Hollidaysburg, Pa.: I would like to ask why he used atropin and homatropin. In the use of atropin, if dropped in once how long will it take before it wears off? I do not use atropin as often as I used to; in the last couple of years I have used homatropin extensively. I find correction is exactly the same. It is good from the therapeutic standpoint to have the prolonged effect of atropin. In a good many grown people you can't use atropin; they can't take the time. Therefore, I use homatropin. I very rarely use homatropin in children—only where there is some good reason, as where the child cannot be away from school for more than a couple of days. If you use atropin how long will it act if only used once?

IRVIN D. METZGER, Pittsburgh, Pa.: At the Base Hospital at Camp Taylor in the course of a large amount of refraction work we resorted to the use of homatropin. This was used two or three times at five-minute intervals. The patient was then asked to wait a half-hour for the mydriatic effect of the drug, after which the retinoscopy was done. By means of the shadow-test a fairly accurate determination could be made of the full refractive error. This formed a basis for determination of the amount of correction that should be made. Since it was convenient to see the patient only once, we felt it to be of some advantage to have only a partial cycloplegic

effect. This was very interesting to me as I watched the results. By investigating some cases I found that we generally secured a fairly accurate prescription, and one which was well tolerated by the patient.

I fail somewhat to see the advantage of using the fogging method in connection with the cycloplegic action of the drug. It may be possible that one can get a quicker action of the drug. Unless that be the case I see no advantage in the use of the fogging method in connection with the drop method.

HENRY W. CHAMPLIN, Towanda, Pa.: I thank Dr. Metzger for endorsing and supplementing what I said in some particulars—that is that the effect of the homatropin certainly facilitates the use of the retinoscope; it makes the two together very dependable. I claim to get the results in one day that you get in two or three days, and that my prescription will be the same as yours. The object in using the atropin and homatropin is to get a prolonged effect. In school children who must have their eyes by Monday morning I am limited by circumstances to the use of homatropin; but in cases that can spare their vision for a week I use atropin. Sooner than we think there is a marked relaxation in the accommodation when atropin is supplemented by strong plus smoke-tint lenses for two or three hours. I know of no disadvantage in combining atropin and homatropin. If I have used homatropin first I like to follow with atropin to hold the accommodation in check longer so that the plus lenses of my prescription may be more readily accepted. The plus smoke-tint lenses are supplementary to the drug cycloplegic, and according to my experience the cycloplegia is hastened and augmented thereby. In this brief time I may not be able to use as much of the drug as I would like; but it being reinforced by the strong plus smoke lenses there is more relaxation than otherwise, and fully meets the needs of my daily work.

I. A CASE OF MASTOIDITIS WITH NO MIDDLE EAR SYMPTOMS.

H. W. HOYT, M. D.,

Rochester, N. Y.

JANE L., age three and one-half years, was brought to my office with the following history: Had croup in the early spring and tonsillitis at Easter, following which she had not felt well. She did not complain of pain anywhere, except that when her ears were washed she said it hurt back of the right ear. This continued for about two weeks, when the family physician was consulted. He could make nothing out of the case and after a few days told the mother to take her to a specialist.

On examination I found her right ear only slightly congested, with no bulging of the drum, and slight deafness. There was marked tenderness over the mastoid, but no bulging of the posterior wall of the external canal. She seemed to feel so well that I waited a day for observation, giving fer. phos. and capsicum, after inflating the ear. The following day the temperature was 99.5, with no complaint unless the mastoid was pressed. I sent her to the hospital, opened the drum, with a free flow of serum and blood, and gave hot irrigations every two hours. The third day after first seeing her the mastoid was just as tender, and I advised operation.

When the incision was made through the skin fully a dram of pus flowed out, having exit through a small perforation near the emissary vein. The whole mastoid, and a very large one at that, was necrotic; the dura was exposed over a space the size of a dime, a small area of the lateral sinus was uncovered, and cells extending over the ear nearly to the zygoma were cleared out. Finding good, smooth, hard bone after curetting, I tried the blood-clot method of closure, trusting to the opening in the drum for drainage. This proved very satisfactory—with only a few drops of serum from the lower end of the incision.

At the time of entrance into hospital the white blood count was

18,000 with a trace of albumen and sugar in the urine. In twelve days after the operation the wound was dry, with very slight scar and no depression. The particular interest in this case is that such a very extensive and dangerous involvement should have taken place with scarcely any symptoms.

II. A CASE OF ABSCESS FROM DENTAL INFECTION SIMULATING ABSCESS OF THE ANTRUM.

H. W. HOYT, M. D.,

Rochester, N. Y.

MRS. L., age 33, was sent to my office May 25th, with a large swelling of the left upper jaw, from the middle of the lip back to the malar eminence. The floor and outer wall of the left nostril were swollen so as to occlude the nostril. The swelling was very painful and fluctuating. In opening the nostril by pressure no secretion was found in the middle meatus. Transillumination showed the antrum clear. The left central upper incisor had been recently filled with a temporary filling as it was painful and deeply necrosed. There was a very small so-called gum-boil one-fourth of an inch above this tooth, which the probe showed to be very superficial.

I opened the abscess just inside the ala of the nose, finding 2 drams of thick pus. The probe could be passed one-and-one-half inches under the skin of the cheek, and a pocket was detected over the root of the tooth spoken of. The tooth was a very poor one; in spite of this the dentist did not want to extract it. But after three days of repeated filling of the abscessed cavity with pus, and severe swelling and pain, he consented. This at once relieved the patient and in four days the abscess was healed.

The dentist was sure of this being in the antrum and that an incisor tooth could not cause it. To my mind dentists are too prone to fill, crown, pivot and bridge the teeth, leaving very fertile fields for infection in cases where the teeth should be extracted.

SUPERFICIAL CARIES OF THE EXTERNAL AUDITORY CANAL.

GEORGE A. SHEPARD, M. D.,

New York, N. Y.

I DESIRE to call the attention of the Society to a complication in chronic catarrh of the middle ear which has appeared a few times in my practice during the last fifteen years,—a small area of necrosis on the floor of the canal, unaccompanied by pain, swelling or other sthenic symptoms, which heals after mild curettement and stimulation, leaving slight loss of substance.

In only one of the cases cited were both ears involved, and this also was the only case with a specific history or any known dyscrasia.

The course of the disease is as follows: On the floor of the outer portion of the bony canal appears a blanching of the skin, which in a few weeks shows a slight swelling. Upon breaking the skin a cheesy secretion is found separating the skin from the rough bone.

Treatment consists in cleaning the bone and curetting to a smooth surface, applying lactic acid or iodine, covering the bone with ichthyol and giving *calcareo fluorica* or *silicea*.

Case 1. J. Q., aged 6 years, parents syphilitic, was first seen in 1897, suffering from a severe attack of intestinal keratitis. In 1904 he called complaining of pain in the right ear. Inspection showed the inner one-third of the canal blocked by a sequestrum from the canal floor. This was removed and the floor curetted. In a few weeks the left was affected in the same way. As there was no apparent reparative effort I made a radical curettement of the right side but was unable to get perfect results, so continued to treat locally both canals on the expectant plan. In about six months healing was complete on both sides. At no time was the hearing seriously affected nor was the tympanic membrane injected. The exposed bone was white and dry, with a little pus where the healthy skin overlapped the dead bone.

SUPERFICIAL CARIES OF THE EXTERNAL AUDITORY CANAL.

Case 2. W. C., aged 53, general health good. Had been under treatment infrequently for chronic catarrh of the middle ear for several months. Hearing in both ears about two-thirds of normal to the whispered voice. The cerumenous glands were inactive and there was no tinnitus. Bone-conduction normal. Treatment consisted of massage, inflation and application to the skin of the canal of Ungt. Hydrarg. Ox Flav. 1%.

Last January the patient presented himself with the complaint that the left canal felt full. I found a white swelling on the floor about twice the size of a millet seed. Under slight pressure the skin broke down disclosing a cheesy substance lying on the bone.

After mild curettement the bone was treated with lactic acid followed by ichthyol. Following this treatment the skin covered the bone, but in a few weeks again broke down in an adjacent area. This was first treated with lactic acid and followed with protonuclein special. After three treatments healing was perfect, leaving a depression on the canal floor of about one-eighth of an inch.

Five other cases have run much the same course, all marked by a lack of subjective symptoms and freedom from effect upon the hearing as compared to the other ear.

I might say that the victim had not been previously subjected to any peculiar treatment at my hands to which might be attributed the cause of this localized caries.

DISCUSSION.

GLENN G. TOWSLEY, Grand Rapids, Mich.: Mr. Chairman: When I received notice that I was to discuss Dr. Shepard's paper on superficial caries of the external auditory canal, I tried to find something in the literature but was unsuccessful. Recently I had occasion to examine a case that I thought might come under this head, but it was in a very advanced stage.

A man forty-five years of age had been complaining for a number of years of not hearing well. I remember about fifteen years ago he was brought to my office, and at that time was totally blind in one eye and almost blind in the other from optic-nerve-atrophy. He also had complete alopecia.

On examination of the nose and throat, I found that he had a

divided septum and advised a submucous resection (which I did); also that he had only about one-half his normal hearing. The external auditory canals were very large and roomy, and the walls and membrana tympani were covered with dry chalky substance. I applied mercuric oxide cerate to affected parts, and gave him silicea 200x internally. He was coming to my office every day for treatment, so I had an opportunity to keep the external auditory canals under observation. In about ten days the membrane began to separate from the walls. With forceps I was able to separate it, which exposed the bony walls and clear membrana tympani. The treatment was continued until the membrane became quite normal. The hearing was very much improved.

WILLIAM M. MUNCY, Providence, R. I.: Mr. Chairman: Five years ago I was taking care of a gentleman about seventy-five years old with rarefied bone sclerosis. I was away for about a month and was surprised on returning to find the bone denuded in an area about half the length of the canal and 3 mm. wide. I immediately anticipated trouble from this condition. As this patient spends his winters in Florida I attempted healing it before he left. I resorted to a combination of scarlet salve and ichthyol, which has the advantage of sticking to the parts involved. The tissues were not inflammatory, and there seemed to be no effort on the part of nature to establish a skin over the denuded area. As the scarlet salve adheres to the bony tissue, an application stays on for some time.

I saw the patient three times before he went South. The area was beginning to fill, but I told him he had better see a physician on his arrival. He was loth to change physicians and did not look upon his condition at all seriously. He was South for two months, and when he returned he said that every time he had wiped his ear he got some of the red salve. Some of it still remained around the edges, and the area was only about one-fourth as large as on the previous visit.

In six months he was entirely relieved and I was greatly pleased, for I had anticipated much trouble from such a large ulcerative surface in a case of rarefied sclerosis.

About six months ago I had a case of suppuration which was

very stubborn and in which there was a denuded area. I did not know how far it would extend, and in this instance I also resorted to the scarlet salve and ichthyol, half-and-half. It not only stimulated the edges close to the ulcerated surface, but kept the suppuration from coming in contact with the denuded area. Some few weeks after the surface was normal and he had no further trouble.

The Treatment of Catarrhal Deafness.—Philip Rice, *Military Surgeon*, Feb., 1920, considers that the usual present-day methods of treating catarrhal deafness are in the main very unsatisfactory. Aurists, as a rule, fail to take into consideration the condition of other organs, disturbances in the functions of which may serve as a contributing cause for the chronicity of this type of ear case.

Dr. Rice has devised a very ingenious apparatus which he names the Concusso-Masseur. This instrument consists of a magnetic coil in the center of which is a movable core, which when energized moves up and down at the rate of about 3,500 per minute. As it comes down it strikes a flexible brass diaphragm over an airtight compartment, the result being a sharp concussion vibration. The effect being that of pure concussion is stimulating, being followed by hyperemia and improved tone. This is the directly opposite effect to that produced by the Delstanche masseur, the instrument frequently used, which since its effect is one of pressure and suction results in relaxation, stasis and a lowered tone.

The treatment is of five or six minutes' duration, and is applied through the eustachian catheter. About two minutes of concussion is also applied to the external auditory canal.

Dr. Rice emphasizes the fact that the success of the treatment lies, in a large measure, in the proper use of the eustachian catheter. A number of cases are cited in detail, and since no mention is made of corrective work in the nose or throat of any of these cases, the marked benefit recorded must be presumed to result from this special form of treatment—W. G. SHEMELEY.

PNEUMOMASSAGE IN EAR CONDITIONS.*

DOUGLAS MACFARLAN, M. D.,

Philadelphia, Pa.

AS a student and for some years after my real introduction to practice I heard from all sides of the lack of success attendant upon the treatment of deafness. My early practice bore this out to such an extent that in dispensary work I tired of recording hearing-tests in anticipation of the improvement which never came. I now present a brighter picture of my experience during the past two years in the treatment of indefinite, long-standing cases of deafness and tinnitus. Pneumomassage on these cases will help many in a decided manner, and will give reasonable comfort, an actual, not a psychological improvement, in many cases.

I use a small bore pump, run rapidly by an electric motor. The rate is fast, but the stroke short; the valves are so arranged as to give the alternation between suction and compression. Naturally, the force has to be mild in its action on account of the delicacy and tenderness of the drum. As to the rationale of the treatment, I believe it merely (1) starts a mild hyperemia, and (2) exercises or mobilizes ossicular joints. Without further comment on these points for the reason that the causes of improvement other than those just stated are still indefinite in my mind, I will proceed to the recital of cases, the results of which have been quite convincing to me. These cases, though in a measure selected ones, are types of quite a number of similar ones. I present them as recorded.

CASE I. Mrs. E., age 73, totally blind since her youth; deafness and tinnitus aurium for years. She has never grown quite accustomed to the ear noises, and from these she particularly desires relief.

Examination showed no catarrhal condition present in the nose or throat. The R. membrane was very flaccid, but otherwise showed

*Read at the 1917 meeting of the O., O. and L. Society—in the absence of Dr. Macfarlan, then in military service.

PNEUMOMASSAGE IN EAR CONDITIONS.

no distinct change. The L. external auditory canal was a mere slit, impacted with cerumen; no clear view of the membrane could be had. No clue to the cause of the marked deafness was present, except on the left side, where stenosis of the external canal with accompanying cerumen might be sufficient. No history of purulent ears. A fracture of the base was the cause of the blindness, but this had occurred in childhood and the deafness had only developed within the last ten years. Nux poisoning from prolonged medication she thinks the cause of her tinnitus.

1/13/16

R. E. Galton 2.6 low tones — 40 sec. $A C > B C$

L. E. " 2.4 " " — 45 " $A C > B C$

Both tubes patent Weber referred to left.

Pneumomassage instituted twice a week.

2/6/16

R. E. Galton 1.5 low tone hearing improved.

L. E. " 1.5 markedly improved, 7 seconds less than normal

3/4/16

R. E. " 1.5 low tones — 5 sec.

L. E. " 1.5 " " — 5 "

3/25/16

R. E. " 1.5 " " — 20 "

L. E. " 2.0 " " — 5 "

4/1/16

R. E. " 1.6 " " — 20 "

L. E. " 1.8 " " — 5 "

Galton improves after Politzerization to 1.3 in both; the patient now has a mild post-nasal catarrh, especially on the R. side.

4/7

R. E. 1.2 Galton low tones — 35 sec.

L. E. 1.0 " " " — 30 "

4/15

R. E. 1.2 " " " — 30 "

L. E. 1.1 " " " — 35 "

The acute catarrhal condition has cleared up and the low tones are again heard well for some months. The hearing for the high tones has settled down at 1.0 Galton, and has remained there in spite of

absence of treatment. The patient and family notice the marked permanent improvement. I now ascribe her deafness largely to the lack of cortical education. By this I mean a slowness of mental perception or interpretation of sounds. Here, however, she has noticed an improvement as time goes on.

CASE 2. Mrs. L. "Rheumatic Fever" two years ago, at which time there was bony tenderness in and about the left ear; hearing has been impaired several months. Lately her vision has been troubling her and she has dizzy attacks, which she ascribes to her eye-trouble. Refraction, she says, cleared this up. However, three years ago she had symptoms which were distinctly vestibular, dizziness, staggering gait and nausea. This occurred during a "nervous spell." There has been no history of running ear. She complains now of ringing in the ears, especially the left.

EXAMINATION: A. D. Drum slightly thickened; cone of light normal; no retraction, no bony or canal tenderness. Galton 2 to 2.2; low tones normal; A. C. $>$ B. C. and proportion normal. A. S.—Drum thick and opaque, no scars, no retraction, no bony or canal tenderness. Galton 1.7; low tones excellent; A. C. $>$ B. C. but bone conduction seems prolonged. Weber not referred; nose and throat normal; no nystagmus, nor vestibular symptoms present; ocular movements and reaction normal. No positive reactions to specific tests; left Eustachian tube has a tendency toward obstruction but there is no retraction of l. drum. Pneumomassage instituted to relieve the tinnitus.

8/9/16

A. S. — G. 1.6. Politzerization: low tones slightly impaired.

A. D. — G. 1.4

8/18

A. S. — G. 1.2 low tones much improved.

A. D. — G. 1.8 tinnitus improved.

8/30

A. S. — G. 1.8 tubes closed, 1.3 after Politzerization.

A. D. — G. 2.0 " " 1.3 " "

9/13

A. S. — G. 1.0 tinnitus cleared up.

PNEUMOMASSAGE IN EAR CONDITIONS.

A. D. — G. 1.1 low tones excellent.

9/20

A. S. — G. 1.1 slight itching in canal.

A. D. — G. .5 low tones excellent.

In this case I ascribe the improvement in hearing to the pneumomassage, for no adventitious treatment was resorted to.

CASE 3. Mrs. S. An asthmatic middle-aged woman, annoyed with tinnitus and resigned to a deafness which followed a gripe attack seven years ago.

TREATMENT.—Pneumomassage.

R. E.

L. E.

A C > B C

B C > A C

A C < 45 sec. w. low tones.

A C < 45 sec.

B C <

B C <

Politzerization improves.

Politzerization improves.

Galton n/

Galton 1.7

Drum n/

Drum n/

Canal n/

Canal n/

Nose and throat n/

Nose and throat n/

Weber ref. to R.

Pneumomassage started for relief of tinnitus not only cleared up the noises but brought up the hearing for low tones from — 45 sec. in each ear to — 18 sec. in R., 25 sec. in L. After a few treatments the tinnitus left and has not returned in three months' time.

The daughter of this patient had an interesting relief for the same trouble.

CASE 4. Mary S., age 15. Deafness for four months, worse on the left side; the "noises in her ears," especially the left, are so pronounced that she cannot get to sleep at nights. History of frequently catching cold, but no definite history as to the origin of the deafness.

R. E. — impacted cerumen; low tones — 35" Galton 1.3

B C > A C

L. E. low tones — 35" Galton 1.5 A C > B C (nearly equal).

Weber to R.

3/12/17

R. E. Galton 2.2 low tones — 30" B C > A C

L. E. " 1.0 " " — 25" A C > B C : 5.8

Weber to R. Noises in L. E. gone; impr. in noises in R. E.

3/16/17

"Hearing and noises improved markedly"—family notice she is not so deaf.

R. E. Galton 1.6 low tones 15" B C > A C

L. E. " 1.0 " " 25" A C > B C

3/22

R. E. Galton .6 low tones 35" B C > A C

L. E. " .5 " " 30" A C > B C

4/10

Weber to R.

R. E. Galton 7 low tones 35" B C > A C

L. E. " 1.4 " " 30" B C > A C

Weber to R.

R. E. Galton .7 low tones 35" B C > A C

L. E. " .4 " " 30" B C > A C

Weber to R.

Noises gone. At one time could hardly sleep on account of them. In short, her tinnitus has completely cleared up and the hearing has permanently improved.

CASE 5. Mrs. R. Deafness gradually came on. She noticed it first two years ago. She thinks a catarrhal condition of the throat responsible, as she notices the hearing to be worse when she has post-nasal trouble. Has been conscious of a slight nasal odor for some time past, but I can find no crusting or discharge and cannot detect the ozena. There is a nervous element in the case; she is slightly neurotic and hyper-sensitive. When she lies down at night she wants to swallow all the time. There is much hawking which is unproductive. Slight obstruction to l. nostril from septal deflection and collapse of alar cartilage on this side. The ears merely show a moderate sclerosis; hearing for high tones poor, low tones short twenty seconds.

Hearing tests:

2/26/17

R. E. Galton 1.7 Fork — 7" — 8"

L. E. " 1.2 " — 5"

Weber was referred to R. B C impaired on both sides.

3/1

R. E. Galton 1.3 Fork — 20"

L. E. " 1.2 " — 5"

Catarrhal condition > p. n. disch. obstr. br. on l. side nose.

3/5

R. E. Galton .65 Fork — improved

L. E. " .25 " n/

Heard clock for first time in years, no odor, does not clear throat.

3/9

R. E. Galton .475

L. E. " .23

3/21

R. E. Galton n/ Fork — 7"

L. E. " n/ " n/

CASE 6. Mrs. R. Chronic catarrhal deafness R. E. Noticed first two years ago, gradually came on. Thinks a catarrhal condition of throat and stomach responsible. Has noticed a nasal odor for two years. No change in taste. No likes or dislikes in matter of taste.

Nose and throat—no dryness, no discharge. When she lies down at night wants to swallow all the time. Clearing throat most of the time unproductive. Stenosis of left nostril.

Examination of nose :

R. L. T. touches a defl. of septum, sl. obstr.; no obstr. on L. mucosa n/, no discharge. Collapse of ala on l. side.

Throat—apparently n/, color good, no discharge

Ears—R. E. Very evident sclerosis, n/ canals.

L. E. Moderate sclerosis, canals n/.

The treatment again followed out was merely Politzerization and suction and compression of the tiny pump. I can confidently say that I never had such prompt results from other routine types of treatment in these ill-defined cases.

CASE 7. J. W. McC. Chronic catarrhal deafness for years. Cannot hear whispers. L. ear worst. No history of running ear.

5/18/16

L. E. Thick drum covered with wax.

Galton 2.4, watch negative.

Bone conduction Weber goes to bad ear

B C sl. $>$ A C —

Improv. on Politzerization.

5/23/16

R. E. Galton 2. Rinné n/

L. E. " 1.5 much improved.

Low tones excellent.

Again pneumomassage was the only treatment employed.

CASE 8. M. L. M.

11/19/16

A. D. low tones $<<<$; high, Galton .4

A. S. low tones — 20", A C 17" $>$ B C
high tones n/ Weber ref. to R.

A. D. Perf. covered with a thin membrane of inner epithelium.
Motile to compression, no retraction; canals n/. Reflex cough on examining A. L. tube open on l. side. R. side also.

A. S. n/ tymp.

3/12/17

Weber ref. to R. sl. — canals O. K.

R. E. low 30" A C $>$ B C

high Galton 5.4 my own A C continues. 29" after her B C

L. E. low — 12 A C $>$ B C 7"

high Galton 1.5

3/18

R. E. low 20" A C $>$ B C — 8.7 high 3.0

L. E. " 30" A C $>$ B C — 9.6 " 0.4

Weber ref. to L. hears it clearly in both.

Buzzing much better — Quin. 30th.

CASE 9. T. T. J.

3/28/16

L. E. Galton n/ low tones — 52"

R. E. " 2.3 " " lost.

Drums n/ not retracted.

History since childhood, worse in L. at first, now in R. E. Earliest symptoms ear-noises, "rheumatic" ear-noises now. No bone conduc-

tion on R. No Weber. Both tubes closed.

4/9/16

Ear noises cleared up.

L. E. high tones n/ low tones — 35"

R. E. Galton 1.8 " " lost to A C & B C

11/6/16

Ear noises still absent. No hearing tests taken.

Here is a case that was treated but twice when his tinnitus cleared up; he did not return for seven months and during this time no tinnitus returned.

CASE 10 Mrs. M. J., age 60 years. Tubal collapse in R. E. Long standing deafness, subject to nervous attacks, fainting, etc. Imp. by catheterization, Politzerization and ear massage. Drums sclerotic and contracted. Supplied ear trumpet.

This case is the first upon which I tried pneumomassage, and I can recall how much her tinnitus bothered her and how difficult it was to clear it up by previous methods of treatment: China high was the only other help, and I have verified this frequently in tinnitus. When pneumomassage was instituted improvement was rapid to both hearing and "noises." The latter cleared up completely, and as to hearing, the deafness which was at first profound, in a few months cleared up to such an extent that she could for the first time in her life use the telephone. The results were practically permanent.

DISCUSSION.

HOWARD P. BELLOW, Boston, Mass.: In this paper we have a corroboration of the experience of, I think, all men who have carefully tested the action of pneumomassage in aural conditions. This experience is that in certain suitable cases, not in all cases, the tinnitus is markedly softened, or otherwise improved in character, and in a small percentage of cases wholly stopped. Also that when deafness is present, in suitable cases, not in all cases, some degree of improvement is the rule and a marked degree of improvement, or even restoration to normal hearing, by no means infrequent. When both tinnitus and deafness are present there are cases in which one or the other is markedly benefited with little effect upon the other, but, as

a rule, if improvement is obtained it is evident in both the tinnitus and deafness in practically even proportion.

The method of using pneumomassage varies somewhat with different men. The evenly maintained rapid, to-and-fro motion, with a short stroke, is that commended in this paper, and seems to have been especially efficacious in relieving tinnitus. Some of us employ by preference, in suitable cases, a much slower motion with perhaps a slightly longer stroke, by means of a so-called "three way pump" by which, at will, a pressure, an alternating pressure and suction, and a suction can be secured. I am inclined to think, from my own experience, that this particular form of pneumomassage may be better adapted to the relief of deafness, while the more rapid and continuous massage, or other form of vibration, may apply more beneficially to the relief of tinnitus. I do not wish to be understood as magnifying this point, however, or to claim that it rests upon any scientific basis which is yet proven. It is a hint only, prompted by some experiences of my own, to encourage the observation of others in this direction.

One feature in this paper of Dr. Macfarlan's to be especially noted is the record of the effect of pneumomassage upon the upper limit of tone-perception as indicated by the Galton whistle. I have never before seen any series of records bearing upon this point and I find it very interesting. It certainly seems to be demonstrated, so far as these records and cases are concerned, that the upper tone perception, when depressed, was definitely raised towards the normal limit by the pneumomassage. It will be well for all of us who have not done so to begin a series of records bearing upon this point for the purpose of verification.

Dr. Macfarlan seems to have relied in his testing and recording of the general hearing power solely upon the position of the upper limit of tone-perception, as indicated by the Galton whistle, and upon the duration of perception for low tones as measured by some modification of the Schwabach test. Personally, I should have liked to have seen also the customary quantitative tests for vocal and mechanical sounds, and these would, at the same time, have enhanced the value of the Rinné tests which he has given and which can sometimes scarcely be interpreted without the accompanying quantitative findings. I

would, also, like to learn what particular modification of the Schwabach test he employed in the testing of low tones, *i. e.*, what particular fork he used—whether he used it by means of air or bone conduction and, if the latter, whether he placed the fork over the mastoid antrum or elsewhere—what he estimated as the normal duration of perception for the particular fork which he employed, and whether he computed the time by the direct method or indirectly by comparison with his own air or bone conduction. These are all points which show great variation in the Schwabach tests. Also I would like to learn what length of treatment he usually employed and with what frequency the treatments were repeated. In one case, only, he mentions twice a week. These are, perhaps, lesser points, but, personally, I should much like to have them clearly in mind and believe they would greatly increase the practical value and usefulness of this interesting paper.

C. L. RUMSEY, Baltimore, Md.: How long do you keep up your own treatments?

H. P. BELLOWES: My own treatments are very short; I have obtained results with surprisingly short treatments. Using a three-way air pump, I devote thirty seconds to each way so that the whole pneumomassage treatment occupies only one-minute-and-a-half. After each treatment I measure the result obtained so that I am in a position to know whether to lengthen, to shorten, or to discontinue it. At the same time I do not depend upon pneumomassage alone but also apply, usually, some form of electricity, sometimes high frequency, sometimes sinusoidal.

C. L. RUMSEY: How do you apply the high frequency current?

H. P. BELLOWES: For deafness I generally choose a small vacuum electrode which shows a blue color and apply it directly to the meatus with a piece of dry cotton over the end of the electrode. Sometimes I use the bulb, keeping it slowly in motion in front of, under and behind the ear for one or two minutes. When there is tinnitus rather than deafness I employ a lower vacuum electrode. This is not based upon anything except my own experience. In applying the sinusoidal electricity I have the patient hold a hand electrode in the hand opposite to the ear which I am treating. The other electrode I apply usually in front of the ear, in the meatus and below

the ear, a half minute in each position. This electrode is a small one the end being covered with wet cotton. I have given up the use of double electrodes and treat each ear separately. As to the strength of the current my guide is the prickling sensation. I try to use just the strength necessary to give the patient that sensation.

G. D. ARNDT, Mt. Vernon, Ohio: Do you use the slow or rapid sinusoidal current?

H. P. BELLows: The rapid.

Use of Pure Cocain for Nasal Anesthesia.—First, apply to the part to be anesthetized pencils of cotton saturated with from 1:1,000 to 1:5,000 solution of epinephrin. These pencils should be left in position for from five to eight minutes. After their removal a small pledget of cotton is wound on an applicator and dipped in water or epinephrin solution. Excess fluid is removed by touching it to a towel. The damp pledget is then dipped into powdered or flake cocain and a small amount of the cocain is rubbed gently over the desired area. The fluid will run off into the remaining dry cocain and cause it to crystallize if the excess water or epinephrin is not removed. After two or three seconds a second application can be made if profound anesthesia is desired. Operation or examination may be done after second application. The author claims that it is a safer method than the use of cocain solutions on account of the contracting effect of the cocain powder on the bloodvessels, preventing its absorption. Anesthesia is more prompt, more profound and more lasting. The small amount of cocain is an advantage because of safety and economy, $\frac{1}{4}$ to $\frac{1}{2}$ being sufficient for a submucous resection.—A. H. Andrew, *Ill. Med. Jour.*, Jan., 1920, 37, No. 1. *Abstr. Jour. A. M. A.*, Vol. 74, No. 6.

H. L. GOWENS.

ABSTRACTS.

Acute Nephritis in Childhood.—Louis W. Hill, *Jour. A. M. A.*, Dec. 6, 1919, states that it is quite characteristic of those cases secondary to tonsillitis that the nephritis does not appear during the period of sore throat and fever, but usually a week or so after the patient is up and around and apparently well. There are far more cases secondary to tonsillitis than to scarlet fever.—D. M.

Owing to the persistent efforts of the energetic Chairman of the **Committee on Pharmacopœia A. I. H.**, assurances come through official sources that regulations will shortly be published, if they are not already published, which will allow homœopathic physicians to purchase from twelve to fifteen gallons of alcohol, including dilutions and potencies, within a year without bonding.—D. M.

In a proving of menthol the following symptoms referable to the head are given: Constantly dull, penetrating frontal and parietal headache, with a sense of fullness in the head, worse from motion or bending the head forward, accompanied by sensitiveness of the eyeballs, twitching of the muscles over the left zygoma, anesthesia and numbness of the same region; followed by sensitiveness to touch after sensation became restored. Supraorbital neuralgia over the left eye. Dull stuffy feeling in the head and nose; nasal catarrh developed, both anterior and posterior, white clear discharge, worse in the morning. Frequent sneezing; a great deal of post-nasal dripping. This was developed by the 2x. The local examination showed an irritation and inflamed mucous membrane of the whole nasal and pharyngeal cavities; sharp pain, starting one and a half inches behind the right ear, extending down to the scapula, worse from pressure and motion; painful soreness in the right mastoid; eustachian tubes feel blocked, with nondescript pain and some deafness. This has been verified. Mucous patches and ulcers on the lower lip and in the buccal cavity, very sore to touch; some of the patches had what appeared to be a false membrane; thirst and dry mouth fre-

quent, much water being taken at times. Tickling and irritability in the fauces; a constriction coming daily at 1 p. m. Fauces red, swollen and infiltrated, difficulty in swallowing but without pain.—Wm. B. Griggs, *Hahnemannian Monthly*, Jan., 1920.—D. M.

French Ophthalmology, 1914-1920.—The author notes the importance of fatigue and emotional stress in bringing on hemeralopia eye condition in dysentery, conjunctivitis and recurring iritis, in malaria, keratitis and iritis, and recurring iritis in spirochetel jaundice. He also notes that the uveal tract should be examined before vaccinating against typhoid.—A. Cantonnet, *J. A. M. A.*, 74, 10, Abs.—Henry L. Gowens, Jr.

Lethargic Encephalitis, History, Pathologic and Clinical Features, and Epidemiology in Brief.—The author states that an early symptom of this encephalitis is the third nerve paralysis, giving rise to diplopia, ptosis, etc., which happens also to be an early symptom in certain forms of food poisoning and notably in botulism. In the second group of MacNulty's six divisions of the types of cases third nerve paralysis occurs along with general disturbance in the function of the central nervous system.—Simon Flexner, *J. A. M. A.*, V. 74, No. 13.—Henry L. Gowens, Jr.

The Eye as a Portal of Infection in Respiratory Diseases.—H. J. Corper and S. B. Enright, *J. A. M. A.*, V. 74, No. 8. Summary: The eye must be considered as one of the important portals of infection in respiratory diseases. . . . The authors state that in one case the micro-organism lived as long as one week in the larynx.—Henry L. Gowens, Jr.

Berman and Kerley, *J. A. M. A.*, May 1, 1920, report cases of **suboxidation of carbohydrates in children**, manifested by evidences of malnutrition with vomiting, constipation and a tendency to an afebrile type Jof rhinitis which is extremely persistent. Restrictions in diet gave the cure.

Acute middle ear infection in children has as its one only reliable sign the bulging drum. All symptoms are more or less undependable

ABSTRACTS.

and often by their absence cause the failure of early diagnosis. Pain in the ear if present, is important, but young infants do not well localize their pains. Rolling the head or putting the hand to the ear is suggestive. Absence of pain or even of general restlessness is not proof that the ear is not inflamed. Temperature elevation is not always present. Tenderness may often not be elicited. Stiffness of the neck is occasionally present, even without enlarged lymph glands.

Retraction and redness of the drum are often the first premonitory signs, as is a suspicion of a beginning acute rhinitis.

By far the greatest number of cases will subside if treated by spraying the nose with epinephrin. With high temperature, bulging drum, tenderness of the tragus and mastoid tip indicate incision. Otherwise the author decries incision on account of the possibility of additional infection from the outside.—L. E. La Fetra, *J. A. M. A.*, May 1, 1920.

There is always a new horizon for onward-looking men, and although we dwell on a small planet, immersed in petty business and not enduring beyond a brief period of years, we are so constituted that our hopes are inaccessible, like stars, and the term of hoping is prolonged until the term of life.—*Stevenson*.

Professional Directory

"Up-To-The-Minute Index" For Quick Reference

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Journal of Ophthalmology Otology and Laryngology

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No. 6

Editorial

THE NEED FOR CRITICS. (Concluded.)

IN the March issue of the JOURNAL there appeared an editorial under the caption, "The Need for Critics," that dealt with the subject in an abstract way. In the April issue the editorial was continued, dealing with the subject in a concrete manner, in which definite cases were cited illustrating this need. In the present issue further reference will be made to the cases cited in the April editorial, with the object of pointing out the absurdity of the claims made in each case.

The motive that prompts people to make exaggerated claims may be questioned in some instances, but there can be no question in the cases under consideration. The fault must lay either in over-enthusiasm, which is prone to cause one to go off half-cocked, or else in limited breadth of knowledge of the subject. The inconsistency of the claims of the three authors becomes apparent when the claims of each in turn is compared with the remaining two. Furthermore, the inconsistencies are proven to be such when we come to match up the claims of each author with facts well established and generally recognized. Dr. Nagle claims to have cured what is equivalent to more than 90 per cent. of chronic middle ear suppurations with vaccines. Mr. Heath claimed to have cured the majority of his cases by an operation on the mastoid alone, leaving the middle ear and eustachian tube untouched, and Dr. Yankauer claimed to have cured a majority of his cases by obliterating the eustachian tube.

Granting for the sake of argument that one of the three authors is correct in his or her claim, then the remaining two must of necessity be entirely wrong. Each author considers the factor he or she is attempting to remove as the principal if not the sole one responsible for the middle ear suppuration. All seem to have ignored the middle

ear as the location in which pathologic changes are to be found in cases of chronic middle ear suppuration.

The first author's contentions are the clumsiest of all. The results which she claims for vaccines have never been duplicated by anyone since. On the contrary, her claims have been amply discredited by everyone who has tried the vaccine treatment for the cure of chronic middle ear suppuration. If the main factor in the etiology of chronic suppuration was one of increased susceptibility to a certain bacterial infection, and all the other factors added together of only minor importance, then might we expect to get results from the use of a particular vaccine suited to the infection comparable with the results obtained by Dr. Nagle. Lacking this confirmation there remains but one conclusion, namely, Dr. Nagle was mistaken and some of us gullible ones were deceived, but less so than our patients.

The second author, Mr. Heath, considers that the main if not the sole factor in keeping up a discharge from the middle ear once it has begun is an involvement of the mastoid cells. If this were true then every case operated after his method ought to recover. No attention to the middle ear or eustachian tube, as well as other well-recognized contributing factors, is necessary. His contentions lack the support of other and more careful investigators. Furthermore, when he was asked at the Ninth International Otological Congress to outline the indications,—pathologic, symptomatic, or otherwise, for his favorite operation, he evaded the question: besides he showed a striking lack of knowledge of the subject, which tends to discount the opinion of anyone who attempts to assume the role of teacher. His opinion therefore is worthless so far as chronic middle ear suppuration is concerned.

The third author, Dr. Yankauer, considers that in most cases the chronicity of an aural discharge is due to a patulous eustachian tube, the permanent occlusion of which by any operative procedure is followed by a cessation of the discharge and thereby a cure of the chronic middle ear suppuration. The very large number of cures claimed by him have not been obtained by anyone since, and accordingly the method has been abandoned by most of us for the more certain radical mastoid operation. His ideas are not new, nor does he claim any originality for the idea but for the method of operation only. It is a well-recognized fact that following radical mastoid operations a dis-

charge from the tube persists in some cases for an indefinite period. This tubal discharge should not be mistaken for the chronic middle ear suppuration that called for the original radical mastoid operation. They are two entirely different processes, calling for different methods of treatment. On the one hand, the chronic middle ear suppuration calls for an extensive radical operation including attention to the middle ear; on the other, a suppurative eustachian tube calls for a tubal operation only, and there is no simpler and better method than the one devised by Yankauer.

Each of these authors has made the mistake common to most of us humans, namely, that of focussing practically our entire attention on a small field, blind and ignorant to everything else that does not come within the scope of our observations, the very antithesis of which is versatility, that quality above all others which makes for the greatest success in the practice of medicine.

G. W. M.

BREADTH OF VISION AND THE SPECIALIST.

IF is lamentably true that all our particular wisdom is at times brought to naught for the simple reason that it is not and never can be all inclusive. As specialists we may be exceptionally well versed in our art, admitting perchance of no gross error in dealing with disabilities confined to our specialty. But human ailments are often in their exact analysis such complex affairs, involving by the interrelations of the functions of our bodies so many related parts, that we will do well to continually cultivate a breadth of vision beyond our specialty.

Here is a general practitioner who, called into our case of acute tonsillitis, finds an endocarditis or a kidney breakdown; conditions that are secondary it is true, but conditions infinitely more serious to the patient than the primary cause. Again, how often we see the paroxysmal, unproductive cough treated locally or palliatively for weeks, with little thought or search for the obscure diathesis. The examples can be multiplied.

We will avoid a great deal of just criticism and will get infinitely better results if we remember that we are primarily doctors and secondarily specialists, and that then as such it will not hold true that "it takes sixteen specialists to make one real doctor."

D. M.

BUREAU OF MEDICAL ECONOMICS.

DR. IRA O. DENMAN, in a recent communication to the editor, reports excellent progress with this bureau. The issue is one of vital importance to the profession, especially at the present time. Quoting from his letter:

"Now in regard to my bureau, I have several men who are to make talks on different topics concerning the financial and material side of the work, but I have no set papers. I think you may put me down as a preliminary paper on, "Phases of the Present Status of the Compulsory Health Insurance in the United States." Our purpose is to have an open meeting, informally discussing the various things which concern the doctor in the matter of making a living out of his profession.

TREASURY DEPARTMENT.

Washington, May 15th, 1920.

To the Editor Addressed:

WE are enclosing herewith a statement entitled "YOUR LIBERTY BOND." We deem it very essential to get the information contained therein before the millions of holders of these Government Securities throughout the United States. You will help in bettering the Liberty Bond situation and in improving the general economic condition by displaying this statement prominently. May we ask that, if possible, you box it

Thanking you for your coöperation in this matter, I remain

Faithfully yours,

WILLIAM MATHER LEWIS,
Director Savings Division.

YOUR LIBERTY BOND.

THE United States Government borrowed money from you to finance the War. You hold the Government's promise to pay you back. This promise is called a Liberty Bond or Victory Note. On this Bond is stated the conditions under which the Government borrowed the money from you.

For instance: If you hold a Bond of the Third Liberty Loan, it

EDITORIAL.

states that on April 15th and October 15th of each year until maturity, you will receive interest on the amount you paid for the Bond. Other issues bear other rates of interest and other maturity dates, all of which are clearly stated on the Bond.

Now, if you keep your Bond until the date when the Government pays you in full for it, you do not need to worry if, in the meantime, the price is low one day or high the next. You and Uncle Sam are living up to your agreement with each other, and neither will lose by it.

On the other hand, if you sell your liberty Bond now, you will find that the man you sell it to will not give you a dollar for every dollar you paid for it. The price has been brought down because so many people are offering to sell their Bonds. If the market is flooded with tomatoes, you can buy them cheap, but if everyone is clamoring for tomatoes and there are few to be had, the price goes up. The same is true of Liberty Bonds. Short-sighted people are dumping them on the market, and wise ones are buying them.

The best advice that can be given to the owner of a Liberty Bond is this: Hold the bond you bought during the war; it is as safe and sound as the United States Government itself.

Buy as many more at the present low rate as you can afford. If you hold them to maturity, you are bound to make the difference between what they sell at now and their face value. You will also receive good interest on your investment.

Hold on to your Liberty Bonds and buy more.

THE SYNERGISM OR CO-OPERATIVE ACTION OF THE EXTRAOCULAR MUSCLES.*

GEORGE A. SUFFA, M. D.,

Boston, Mass.

THIS study on the synergism or co-operative action of the extraocular muscles to maintain co-ordination of ocular movements will take into consideration, mainly, the mechanical features of the problem as presented by the ophthalmotrope, the dimensions of which are six times those of the average normal person's eyes. In order to make it a comprehensive study, knowledge of the form of the orbits, the primary position of the eyes therein and the origin and attachment of the various muscles and their contact arcs is necessary.

Fig. 1 is a reduced tracing of an actual skull cut horizontally through the centre of the orbits: A-A', the temporal boundaries, diverge 45° from the median plane. I, the nasal boundaries, are parallel with the median plane of the head. B-B', the orbital axes, diverge 25° . The eyes are arbitrarily placed pointing straight ahead, and with the visual lines R-L are in the primary position, parallel to the median plane of the head.

The origin and attachment of the muscles is given briefly because a minute description is unnecessary for the purpose of this paper, the point of attachment and line of traction of the muscles being the important features.

At M, the interni arise at the inner side of the apex of each orbit, pass forward horizontally practically parallel to each other and the nasal boundaries of the orbits, to their attachments to the globes 33 mm. from the corneal margin, and have contact arcs of 42 mm.

At D-D', the externi arise at the outer side of the apex of each orbit, pass forward horizontally, diverging 45° to their attachment to the globes 42 mm. from the corneal margin and have contact arcs of 70. mm.

At E the inferior recti arise at the lower part of the apex of each

*Read at the meeting of the O., O. and L. Society, Asbury Park, N. J., June 1919.

SYNERGISM OR CO-OPERATIVE ACTION OF THE EXTRAOCULAR MUSCLES.

orbit, pass forward and downward, diverging 20° to their attachment to the globes 39 mm. from the corneal margin, and have contact arcs of 55 mm.

At E the superior recti arise at the upper part of the apex of each orbit, pass forward and upward—diverging slightly more than the inferior recti—to their attachment to the globes 46 mm. from the corneal margin, and have contact arcs of 45. mm.

A circular line connecting the attachment of the recti muscles, beginning at the attachment of the internal rectus muscle and ending with the superior rectus muscle, forms the familiar spiral, the internal rectus being the nearest and the superior rectus the farthest from the corneal margin. The position of the attachment of the recti muscles has been given in their relation to the margin of the cornea because it has been customary to do so; it would be far more logical to describe the attachments in their relation to the equatorial plane, as it is their relation to the centres of rotation that affects their functional power, action, and behavior during ocular movements.

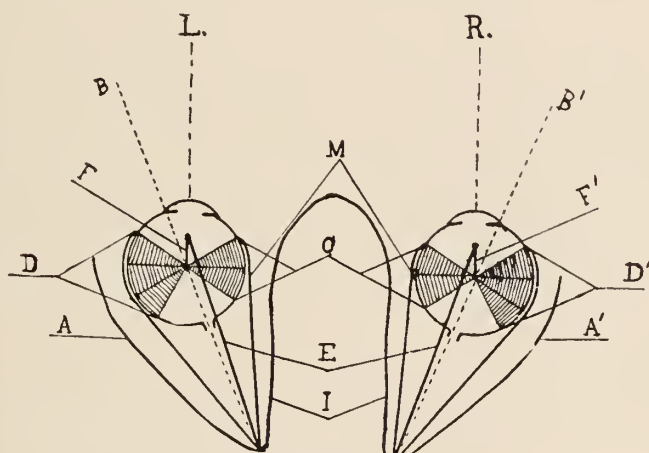


Fig 1.

Although the origin of the superior oblique muscle is at the apex of the orbit, the line of traction of the muscle is from the centre of the pulley to the centre of attachment to the globe; from the pulley at the superior anterior part of the orbit the muscle passes outward and backward to the attachment to the globe 36. mm. posterior to the equator in the vertical plane of the eye, and has a contact arc of 41. mm.

Its line of traction as placed on the ophthalmotrope describes an angle of 25° from the vertical plane of the head, when the eyes are in the primary position.

The inferior oblique muscle arises at the anterior inferior part of orbit, passes outward, upward and backward to its attachment to the globe, midway between the externus and the superior rectus muscles, 38. mm. posterior to the equator, and has a contact arc of 55. mm. Its line of traction describes an angle of 27° from the vertical plane.

AXES OF ROTATION OR VERSION: There are two axes of rotation in each eye in all ocular movements, a vertical axis for horizontal rotations: these axes in the two eyes are kept parallel to each other in all rotations. A horizontal axis for vertical rotations in each eye, which axes would form a continuous straight line if extended, only when the visual lines are parallel,—not converged,—when the median plane of the head and the vertical axes are in line with each other, and when both axes are on a level with each other, but they remain parallel to each other horizontally at all times.

In all ocular rotations (excepting certain oblique rotations) one rectus muscle acts as the principal rotator; the line of traction in this muscle is always from the centre of its origin to the centre of attachment of the muscle, but the force or the leverage which remains constant is exerted at contact to the globe, and is at right angles to the line of traction as long as the muscle remains in contact with the globe; contact is never lost in normal rotations. While the main action of a rectus muscle as principal is rotation, it can act purely as a rotator only when the line of traction of the muscle and the visual line coincide, a position not usually maintained during the use of the eyes; the least separation of these lines brings into play torsion the secondary action of the muscle, and also accessory action, the torsional effect and the accessory action increasing the farther these lines separate.

In exact downward rotations, with the visual lines parallel or convergent, there are always two accessory muscles aiding the principal muscle, and the active and the passive actions are conducted by corresponding muscles, and are equal in both eyes. In all other rotations this unity of action ceases.

The principal action of the oblique muscles is *torsion*; traction in

the inferior oblique muscles is exerted from the centre of origin to the centre of attachment as in the recti muscles; traction in the superior oblique is from the centre of the pulley to the centre of attachment of the muscles; force in these muscles whether acting actively or passively in torsion, or as accessory rotators to the externi, is at their attachment to the globe. The axis of torsion is the line of vision passing outward from the macula through the centre of motion; force is applied to this axis of torsion by leverage from the point of attachment of each muscle to this axis of torsion, a lever passing from the point of attachment to the vertical axes when these muscles act as accessories in outward rotation. When these muscles act individually as accessory rotators their force is exerted at contact to the globe and is at right angles to the centre of rotation; the superior oblique rotating the eye downward, and the inferior rotating it upward.

DISPLACEMENT OF MUSCLES: The recti muscles are displaced at their attachment during rotations in proportion as the visual line and the line of traction of the muscles are out of alignment, both as principal and as accessories, and the greatest displacement is in the accessories, except in certain oblique rotations, when displacement in the principal muscle and one accessory is nearer equal.

CHANGING OF THE CONTACT ARCS IN THE PRINCIPAL ROTATOR AND ACCESSORIES: During rotations there is a progressive unwinding of the contact arcs in the principal rotators, and to a smaller degree in the accessories; whenever the line of traction of a principal muscle and the line of vision do not coincide—are out of line—there is also a slipping of the eyes under the contact arcs of the principal muscles; this slipping of the eye takes place at all times under the accessory muscles in all rotations and to a much larger degree than in the principal rotators, except in certain oblique rotations, when the slipping, unwinding and displacement of the attachments are nearer alike in both principals and accessories. There is also a twisting along the axis of traction in the ocular portion of the muscles whenever there is torsional action, more marked the greater the torsional effect.

In addition to the above effects as noted, whenever there is a slipping of the eye under the contact arcs of the active muscles both as principals and accessories, especially marked in the superior oblique muscle, there is also a certain amount of contraction of the muscles

to take up the slack caused by their passing over a smaller diameter of the globe in the changed position. In all ocular rotations no single muscle can act alone; there are always two or more muscles as accessories aiding the principal rotator in each eye, their combined action together with the passive muscles at all times keeping the vertical and horizontal planes parallel to each other.

The contact arcs in the primary positions are as follows: The internal recti 42. mm., the inferior recti 55. mm., the superior recti 45. mm., the external recti 70. mm., the superior oblique muscles 41 mm., and the inferior oblique muscles 55. mm. The contact arc of the internus is the smallest and of the externus is the largest of the recti muscles; the difference in the size of the contact arcs in the recti muscles is due to the form of the orbits, the position of the eyes within the orbits, the closeness of the origin of the recti muscles, the parallel position of the internal recti muscles, the divergence of the other recti muscles as they pass forward, and the difference in the distance of their attachment from the margin of the cornea. In the oblique muscles it is due to the position of the point or origin—the pulley in the superior muscle; the direction the muscles take to reach the contact point on the globe, and the position of their attachments.

With the ophthalmotrope set at 360. mm., corresponding to a pupillary distance of 60. mm.— $2.25''$ — 5° of convergence in each eye is required to converge the visual lines to correspond to 13.9", an average reading distance. The active muscles are three in number in each eye; the internal rectus is the principal rotator and contracts 3 mm.; the superior and inferior recti as accessories contract 0.5 mm. each. The principal passive or opposing muscle is the external rectus which stretches 3 mm., as accessories the superior oblique muscles stretch 0.5 mm., the inferior oblique muscles remaining neutral.

TABLE—BOTH EYES CONVERGED 5° .

Active.		Passive.	
Int. R.	3.0 mm.	Ext. R.	3.0 mm.
Sup. R.	0.5	Sup. Ob.	0.5
Inf. R.	0.5	Inf. Ob.	0.0

Both eyes converged 5° , the visual lines directed in the median plane and turned 10° downward as in reading, the inferior recti are

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the principal rotators and 11 mm. of contraction is shown; as accessories the internal recti contract 3 mm. and the superior oblique muscles 2.5 mm.

The principal passive muscles superior recti show 11.0 mm. of stretching; as accessories the external recti show 3.0 mm., and the inferior oblique muscles show 6.0 mm.

TABLE: BOTH EYES CONVERGED 5° ; TURNED DOWNWARD 10° .

Active.	Both Eyes.	Passive.	Both Eyes.
Inf. R.	11.0 mm.	Sup. R.	11.0 mm.
Int. R.	3.0	Inf. Ob.	6.0
Sup Ob.	2.5	Ext. R.	3.0

Both eyes converged 5° , the visual lines directed in the median plane and turned downward 20° , the inferior recti contract 23.0 mm., the superior oblique 6.0 mm., the internal recti 4.0 mm. The principal passive muscles the superior recti stretch 23.0 mm., the inferior oblique muscles 13.0 mm., and the external recti 1.5 mm.

TABLE: BOTH EYES CONVERGED 5° ; TURNED DOWNWARD 20° .

Active.		Passive.	
Inf. R.	23.0 mm.	Sup. R.	23.0 mm.
Sup. Ob.	6.0	Inf. Ob.	13.0
Int. R.	4.0	Ext. R.	1.5

ANALYSIS OF THE BEHAVIOR OF THE MUSCLES DURING THE ABOVE ROTATIONS: When the eyes are converged 5° on the horizontal plane, the interni show a contraction of 3.0 mm.; when converged the same amount 5° , the visual line directed 10° downward, contraction in the internal recti is practically the same, but when the visual lines are directed 20° downward, the internal recti are contracted 4.0 mm., an increase of 33%; this increase in contraction is due to a change in position of the attachments; as the eyes turn downward the centre of attachment of the muscles as radii of curvature turning with the axes of rotation have receded, and the attachments when in this position are displaced downward and backward, consequently the muscles are passing over a smaller diameter of the globe, and are foreshortened. Although acting as principals in convergence they act powerfully as accessories in downward version, having taken on double action or duty. With 5° of convergence and 10° of downward version, there is 11 mm. of contraction in the inferior recti and they are the principal verterers; de-

ducting the 0.5 mm. of contraction they made as accessory convergers, there is 10.5 mm. of contraction to produce 10° of downward version. In 20° of downward version, convergence remaining the same, the inferior recti contract 23 mm., or 12 mm. of contraction is added to produce 10° of added version, 1.5 mm. more than was required to produce the first 10° of downward version; the displacement of the attachment, the slipping of the globe under the contact arc, the smaller diameter of the globe under the contact arc, and the consequent foreshortening of the muscle as previously described account for the increase in the contraction of the muscle. With 5° of convergence on the horizontal plane the superior recti as accessories contracted 0.5 mm., under the same convergence with the eyes directed 10° downward, these muscles become passive or stretched 11.0 mm.; adding the 0.5 mm. of contraction made in accessory convergence on the horizontal plane, shows 11.5 mm. of stretching in these muscles, or 1.0 mm. more passive action stretching of these muscles than there is contraction of the inferior recti.

With both eyes directed 20° downward, the superior recti record 23.0 mm. of stretching; deducting the 11.0 mm. of stretching recorded in the first 10° of downward version makes 12.0 mm. of stretching in the second 10° of downward version, 5 mm. more stretching than in the first 5° of downward version.

With 5° of convergence, the eyes turned downward 10° , the superior oblique muscles as accessories record 2.5 mm. of contraction; adding the 0.5 mm. of stretching produced in 5° of accessory convergence, makes 3.0 mm. of contraction in these muscles; with the eye turned 20° downward, 6.0 mm. of stretching is recorded, deducting the 2.5 mm. of contraction recorded in the first 10° of downward version makes 3.5 mm. of contraction in the muscles, .5 mm. more than was required in the first 10° of downward version.

With 5° of convergence the external recti muscles are passive, stretched 3.0 mm.; with the visual lines directed 10° downward there is practically no change in their passive action, but when the visual lines are directed 20° downward, passive action is but 1.5 mm., a decrease of 1.5 mm., or 1.5 mm. less of stretching than took place in the first 10° of downward version. This reduction is due to the displacement of the attachment, slipping of the globe under the contact

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arcs, foreshortening, etc., as previously explained, in their capacity as accessory downward verterers. Although still recorded on the passive side in opposition to the active interni in 5° of convergence, they are also active as accessories aiding the inferior recti in downward version.

The inferior oblique muscles with convergence 5° and downward version 10° as opponents are passive, showing a total stretching of 6.0 mm. or double the contraction shown in the active superior oblique muscles. The superior oblique muscles with 20° downward version convergence remaining at 5° are contracted 6.0 mm., .5 mm. more action than was required in the first 10° of downward version; the inferior oblique muscles are stretched 13.0 mm., 1.0 mm. more than was used in the first 10° of downward version. This large passive action of the inferior oblique muscles in the first 10° of downward version and the relative increase in the second 10° of downward version is due to the position of the attachment of the muscles, the slipping of the globes under the contact arcs so that they pass over a larger diameter of the globe.

With both eyes converged 5°, turned downward 10°, and to the right 10°, as previously stated, there is dissociation in both unity and degree of action in the muscles. In the right eye the inferior rectus is contracted = active = 10.0 mm., the external rectus 9.0 mm., the superior oblique 7.0 mm.; in the left eye the internal rectus is contracted 15.0 mm., the inferior rectus 13.0 mm., three active muscles in the right eye and two active muscles in the left eye. In the right eye the superior rectus is stretched—passive—12.0 mm., the internal rectus 8.0 mm., the inferior oblique 5.0 mm., in the left eye the external rectus is passive 14.0 mm., the superior rectus 9.0 mm., the inferior oblique 6.5 mm., the superior oblique 2.5 mm., showing three passive muscles in the right eye and four passive muscles in the left eye.

TABLE: CONVERGENCE, 5°; DOWNWARD, 10°; TO THE RIGHT, 10°.

R. E. Active.			L. E.			R. E. Passive.			L. E.		
Inf.	E.	10.0 mm.	Int.	R.	15.0 mm.	Sup.	R.	12.0 mm.	Ext.	R.	14.0 mm.
Ext.	R.	9.0	Inf.	R.	13.0	Int.	R.	8.0	Sup.	R.	9.0
Sub	Ob.	7.0				Inf.	Ob.	5.0	Inf	Ob.	6.5
									Sup.	Ob.	2.5

With both eyes converged 5°, turned downward 10°, and to the right 20°, the external rectus of the right eye is contracted 20.0 mm., the superior oblique 12.5 mm., the inferior rectus 9.5 mm. In the

left eye the internal rectus is contracted 26.0 mm., the inferior rectus 12.0 mm. In the right eye the internal rectus is stretched 19.0 mm., the superior rectus 13.0 mm., the inferior oblique 3.0 mm.; in the left eye the external rectus 25.0 mm., the superior oblique 8.0 mm., the superior rectus 7.5 mm., in the inferior oblique 6.5 mm.

TABLE: CONVERGENCE, 5° ; DOWNWARD, 10° ; TO THE RIGHT, 20° .

R. E.	Active.		L. E.	R. E.	Passive.		L. E.
Ext.	R. 20. mm.	Int.	R. 26. mm.	Int.	R. 19.0 mm.	Ext.	R. 25.0 mm.
Sub.	Ob. 12.5	Inf.	R. 12.	Sup.	R. 13.0	Sup.	Ob. 8.0
Inf.	R. 9.5			Inf.	Ob. 3.0	Sup.	R. 7.5
						Inf.	Ob. 6.5

With both eyes converged 5° downward, turned downward 20° , and to the right 20° , the external rectus of the right eye is contracted 22.0 mm., the inferior rectus 21.5 mm., and the superior oblique 18.0 mm.; in the left eye the inferior rectus is contracted 30.0 mm., the internal rectus 28.0 mm. In the right eye, the superior rectus is stretched 25.0 mm., the internal rectus 18.0 mm., the inferior oblique 10.2 mm.; in the left eye the external rectus is stretched 23.2 mm., in the superior rectus 19.5 mm., the inferior oblique 12.2 mm., and the superior oblique 5.5 mm.

TABLE: CONVERGENCE, 5° ; DOWNWARD, 20° ; TO THE RIGHT, 20° .

R. E.	Active.		L. E.	R. E.	Passive.		L. E.
Ext.	R. 22.0 mm.	Inf.	R. 30.0 mm.	Sup.	R. 25.0 mm.	Ext.	R. 23.2 mm.
Inf.	R. 21.5	Int.	R. 28.0	Int.	R. 18.0	Sup.	R. 19.5
Sup.	Ob. 18.0			Inf.	Ob. 10.2	Inf.	Ob. 12.2
						Sup.	Ob. 5.5

ACTIVE ACTION: With convergence of 5° , the eyes directed 10° downward and 10° to the right, the inferior rectus muscle of the right eye records 10. mm. of contraction. Deducting the 0.5 mm. of contraction made as accessory converger, makes 9.5 mm. of actual contraction; in 20° of version to the right the muscle records 9.5 mm. of contraction, 0.5 mm. less contraction than as made in the first 10° of outward version.

In 10° of outward version, the external rectus of the right eye records 9.0 mm. of contraction, adding the 3.0 mm. of stretching produced in 5° of convergence and 10° of downward version, makes 12.0 mm. of contraction in this muscle; in 20° of version to the right 20.0 mm. of contraction is recorded, deducting the 9 mm. recorded in the first 10° of version, makes 11.0 mm. of contraction, or 1.0 mm. less contraction than was made in the first 10° of version to the right.

In 10° of outward version the superior oblique muscle of the right eye records 7.0 mm. of contraction, deducting the 2.5 mm. of contraction recorded in 5° of convergence and 10° of downward version, makes 4.5 mm. of contraction. With 20° of version to the right 12.5 mm. of contraction is recorded; deducting the 7.0 mm. of contraction recorded in the first 10° of version to the right, makes 5.0 mm. of contraction, or 0.5 mm. more than was made in the first 10° outward version.

With convergence of 5° , the eyes directed downward 10° and 10° to the right, the internal rectus muscle of the left eye records 15.0 mm. of the contraction; deducting the 3.0 mm. of contraction made in 5° of convergence and 10° of downward version, makes 12.0 mm. of contraction in this muscle; with the eyes directed 20° to the right, 26.0 mm. of contraction is recorded; deducting the 15.0 mm. recorded in 10° of version to the right, makes 11.0 mm. of contraction in this muscle, 1.0 mm. less contraction in the second 10° version to the right. The left inferior rectus muscle in 10° of version to the right records 13.0 mm. of contraction; deducting the 11.0 mm. of contraction recorded as accessory in 5° of convergence and 10° as principal in downward version, makes 2.0 mm. of contraction in this muscle; with 20° of version to the right, 12.0 mm. of contraction is recorded, 1.0 mm. less contraction than was made in the first 10° of version to the right.

PASSIVE ACTION: With convergence of 5° , the eyes directed 10° downward and 10° to the right, the superior rectus muscle of the right eye records 12.0 mm. of the stretching; deducting the 11.0 mm. of stretching recorded in 10° of downward version and in accessory convergence of 5° , makes 1.0 mm. of stretching in this muscle; with 20° of version to the right 13.0 mm. of stretching is shown; deducting the 12.0 mm. of stretching recorded in the first 10° of version to the right shows 1.0 mm. of the stretching in this muscle in the second 20° of version to the right. The right internal rectus muscle records 8.0 mm. of stretching in 10° of version to the right; adding the 3.0 mm. of contraction made in 5° of convergence, makes 11.0 mm. of stretching in this muscle; with 20° of version to the right, 19.0 mm. of stretching is recorded, deducting the 8.0 mm. of stretching recorded in the first 10° of version to the right, makes 11.0 mm. of stretching

in this muscle in the second 10° of version to the right. The right inferior oblique muscle records 5.0 mm. of stretching in 10° of version to the right, 1.0 mm. less of stretching than was recorded in 5° of convergence and 10° of downward version. With 20° of version to the right 3.0 mm. of stretching is recorded, 2.0 mm. less stretching than was recorded in the first 10° of version to the right.

The left external rectus muscle records 14.0 mm. of stretching in 10° of version to the right, deducting the 3.0 mm. of stretching produced in 5° of convergence and 10° of downward version, makes 11.0 mm. of stretching in this muscle; with 20° of version to the right 25.0 mm. of stretching is recorded, deducting the 14.0 mm. of stretching recorded in the first 10° of version to the right, makes 11.0 mm. of stretching in the second 10° of version to the right. The left superior rectus muscle records 9.0 mm. of stretching, 2.0 mm. less stretching than was produced in 5° of convergence and 10° of downward version; with 20° of version to the right 7.5 mm. of stretching is recorded, 1.5 mm. less stretching than was recorded and produced in the first 10° of version to the right. The left inferior oblique muscle records 6.5 mm. of stretching in 10° of version to the right; deducting the 6.0 mm. of stretching recorded in 5° of convergence and 10° of downward version makes 0.5 mm. of stretching in this muscle; with 20° of version to the right 6.5 mm. of stretching is recorded—no further stretching or change having taken place in the muscle in the second 10° of version to the right. The left superior oblique muscle records 2.5 mm. of stretching in 10° of version to the right; adding the 2.5 mm. of contraction made in 10° of downward version, makes 5.0 mm. of stretching in this muscle in the first 10° of downward version; with the 20° of version to the right 8.0 mm. of stretching is recorded; deducting the 2.5 mm. of stretching recorded in the first 10° of version to the right makes 5.5 mm. of stretching in the second 10° of version to the right.

FUNCTION OF THE OCULAR MUSCLES AS REVEALED IN THE TABLES, ETC.: The main function of the recti muscles is rotation under two divisions. First and most important, they act as principal rotators, initiating the movement, and undergoing the greatest amount of contraction; second, as accessory rotators, with relatively small amount of contraction, but of powerful action. Secondary action is torsion.

A rectus muscle can act purely as a rotator only when the line of traction of the muscle and the line of vision coincide. In the least separation of these lines, in addition, they functionate as accessory rotators, and in torsion.

EXAMPLES: In 5° of convergence on the horizontal plane, the interni act purely as rotators; in the least downward direction they act as accessory downward verterers, and in inward torsion.

The passive externi act purely in the single capacity as opposites to the interni only when the eyes are directed in the horizontal plane; any deviation therefrom brings into play their active accessory action, aiding the rectus muscle producing the deviation, and passive torsion is in opposition to the torsion in the active verter; they act as accessory downward verterers in conjunction with the active interni, thus acting in a dual capacity; passive in rotation and in torsion in opposition to the interni, and active as accessory downward verterers in conjunction with the active interni, aiding the inferior recti in downward version.

With convergence of 5° , the eyes directed directly downward, the main function of the inferior recti muscles is version; the line of vision and the line of traction in these muscles not coinciding, they act as accessory convergers, and in outward torsion. The opposing passive muscles, the superior recti, oppose the inferior recti in downward version; they tort the eyes inward opposing the outward torsion of the inferior recti muscles and act in conjunction with the superior recti as accessories to the internal recti muscles in convergence.

With convergence of 5° , the eyes turned downward 10° and to the right 10° , the inferior rectus muscle of the right eye is the principal downward verter; it acts as accessory in convergence of 5° and torts the eye outward. The principal passive or opposing muscle to downward version is the superior rectus muscle, torsion is inward opposing the outward torsion to the inferior rectus muscle, it acts as accessory in convergence, aiding the internal rectus. The external rectus muscle is the principal outward verter; it acts as accessory in downward version, aiding the inferior rectus muscle. It torts the eye outward, aiding the outward torsion of the inferior rectus and opposes the inward torsion of the internal and superior recti muscles.

The internal rectus muscle of the right eye is the principal pas-

sive muscle opposing the active external rectus in version to the right, yet is acting as principal converger in maintaining 5° of convergence; as accessory it aids the inferior rectus muscle in downward version; it torts the eye—vertical plane—inward.

With convergence of 5° , downward 10° , to the right 10° , the internal rectus muscle of the left eye is the principal active verter; as accessory it aids the inferior rectus muscle in downward version, it torts the eye inward. The external rectus muscle of the left eye is the principal passive muscle opposing the internal rectus muscle in version to the right; it in conjunction with the internal rectus muscle acts as accessory in downward version, and torts the eye outward opposing the inward torsion of the internal rectus muscle. The inferior rectus muscle is the principal downward verter; as accessory it aids the internal rectus in 5° of convergence; it torts the eye outward.

The left superior rectus is the principal passive muscle opposing the inferior rectus muscle in downward version; as accessory it aids the internal rectus in converging 5° and in verterg the eye to the right 10° ; it torts the eye inward, aiding inward torsion in the internal rectus muscle, but opposes torsion in the inferior rectus muscle.

With convergence of 5° , version downward 10° and to the right 10° , the superior oblique muscle of the right eye acts as accessory in downward and outward version, aiding the principal active muscles, producing these versions; torsion is inward in all directions of normal version in these muscles; the right inferior oblique muscle torts the upper part of the eye outward in all directions of normal version, and opposes the superior oblique muscles in inward torsion and downward version, and acts as accessory in version to the right, in conjunction with the superior oblique muscle.

With convergence of 5° , version to the right 10° , downward 10° , the superior oblique muscle of the left eye torts the eye in direct opposition to the inferior oblique muscle. It acts as active accessory aiding the inferior rectus muscle in downward version, and as passive accessory in conjunction with the inferior oblique muscle in opposition to the internal rectus muscle in 5° of convergence, and 10° of version to the right. The inferior oblique muscle of the left eye torts the upper part of the eye outward in opposition to the superior oblique muscle, and in conjunction with the superior oblique muscle opposes

version to the right and convergence, and opposes the downward version of the superior oblique muscle.

It will be seen by the above description of the behavior of the ocular muscles during the rotations or versions given, that the action of the muscles is very complicated and that their action depends on various mechanical causes that operate in different ways and in different degrees in the muscles depending upon the difference in the position of their attachments and the direction of the eyes. In writing this paper I intended to take up all the mechanical, together with the functional and structural features concerned in these movements, but found it impossible to do so in a reasonably lengthy paper so will conclude by giving certain general rules that govern ocular movements, leaving for a later paper features not included in this one.

GENERAL RULES: The recti muscles individually, when active, undergo the following changes: In their primary action, first contraction as principals, initiating and producing the versions; their secondary action is torsion; they also act as accessory verters—always two or more muscles in conjunction with another principal rotator; their secondary action, torsion, and their accessory action enter automatically the instant the visual line and the line of traction of any rectus muscle do not coincide. In all versions when the visual line and the line of traction of a principal muscle coincide, there is an unwinding of the contact arcs and a shortening of the muscle but no torsional effect or accessory action in that muscle; when the visual line and the line of traction do not coincide, the point of attachment as a radius of curvature recedes, causing a foreshortening of the muscle, the globe slipping under the contact arc, causing the muscle to pass over a smaller diameter of the globe, increasing the foreshortening.

Passive action is the reverse in the principal opponent; the muscle is stretched, the attachment pushed forward, the contact enlarged and torsion is in the opposite direction; but the accessory action is in conjunction with an active accessory muscle.

A description of the action of the oblique muscle, both active and passive, will be taken up at a later date, but I will say here that their behavior is even more complicated than the behavior of the recti muscles.

Features that have been mentioned and partly considered, to be

taken up in a later paper in detail, are the movements during rotation of the points of attachment; the changes in the contact arcs; the amount of slipping of the globes under the contact arcs; the difference in force in torsion due to the difference in position of the muscles in the various rotations, and the different effect on the muscles of each eye in lateral version at all angles due to the pupillary distance; the number of muscles actively and passively engaged; a comparison of their collective relative strength as shown by their united contraction and stretching in millimeters; of the collective relative size of their contact arcs; the sum of the collective millimeters of displacement of their attachments; and the sum of the millimeters of slipping of the globes under the contact arcs, lessening the diameter on the active and enlarging the diameter on the passive side; the number of accessory muscles aiding the torsion of the principal rotation and the number of muscles aiding torsion in the principal passive muscle, and if possible a comparison of their relative power.

DISCUSSION.

G. W. MACKENZIE, Philadelphia, Pa.: I wish to express my thanks to Dr. Suffa, first, for the compliment he pays in asking me to discuss his paper; secondly, for his having mailed to me a copy of his paper at least two weeks prior to the meeting in order to allow time for the careful study of it; thirdly, for his excellent contribution to the program, which must have cost him a considerable amount of time and study—not to mention the monetary outlay—in the preparation of the data for his paper. In spite of the time he allowed me to prepare a discussion, time sufficient under ordinary circumstances, it was not sufficient in my case, for the whole period has been consumed in attendance at medical meetings. I am forced, therefore, to beg Dr. Suffa's kind indulgence for my apparent neglect to give the paper the consideration it deserves.

I was from the beginning impressed with the skillfully constructed ophthalmotrope which Dr. Suffa first showed at one of our meetings several years ago and which, I understand, he has since improved. His, I believe was the first instrument of its kind to be constructed after a carefully worked out mathematical plan. His computations relative to the degrees of rotation of the eyeball trans-

posed into millimeters of muscle-contraction, and vice versa, are irrefutable as they apply to the primary and secondary action of the recti muscles. That there is a synergism of action in several eye muscles necessary to the performance of precise movements of the eyeball is a fact that has been recognized by physiologists for a long time; furthermore, the centers for this synergism are known to be located in the cerebellum. Dr. Suffa has restated these truths on more than one occasion. In this present paper he claims that "in all ocular rotations no single muscle can act alone; there are always two or more muscles aiding the principal rotator of each eye, their combined action at all times keeping the vertical planes parallel with each other."

Concerning the secondary action of the recti muscles, I recall a fact that I mentioned on a previous occasion in discussing Dr. Suffa's observations with the ophthalmotrope, viz., that in my studies of spontaneous nystagmus when, for instance, the patient is directed to look to the extreme right, that instead of the nystagmus being purely horizontal at all times, as one might expect it to be, there is an element of torsion outward; that is, the nystagmus is of a mixed type (horizontal and rotary); furthermore, the farther outward the eye is rotated, the more pronounced is the rotary element. Now the rotary element of the nystagmus could have been due to one of two things: a secondary action of the external rectus or a concomitant effort on the part of the inferior oblique muscle; while the right eyeball was behaving in the manner above described, the left one would make similar and harmonious movements, which could have been due to the secondary action of the internal rectus, or the primary action of the superior oblique; at all events, the movements of the two eyes were synchronous. I should be pleased to demonstrate this behavior of the eyeballs clinically to Dr. Suffa, using any of the gentlemen present as the subject. I take it that Dr. Suffa would explain the rotary element of the nystagmus in the general remark on page 4 of his manuscript, which I quote as follows: "While the main action of a rectus muscle as principal is rotation, it can act purely as a rotator only when the line of traction of the muscle and the visual lines coincide; a position not usually maintained during the use of the eyes, the least separation of these lines brings in to play the secondary action of the muscles, torsion, the torsional effect increasing the further these lines

separate." I would like to have Dr. Suffa's opinion on this particular point, for I believe that the problem can be solved only by the use of the ophthalmotrope.

I find nothing in Dr. Suffa's work and conclusions that I can dispute, for I have never had the use of such an instrument, nor can anyone who has not had the advantage of an instrument such as his. The subject is one of interest and the possibilities of still further development are considerable. I feel that we all owe Dr. Suffa a debt of gratitude, as we do every other one who does original research work in our particular specialty.

G. A. SUFFA: In making rotation test watch for nystagmus; quite a number of cases will show nystagmus in extreme angles, and I have always wondered whether that fact was taken into account when making the rotation tests.

G. W. MACKENZIE: If any one man can master this subject he should be more than able to master the subject of labyrinthine work, for a mastery of the latter is relatively easy compared with the former.

Dr. Mackenzie then demonstrated—using one of the gentlemen present—that when examining for the presence of spontaneous nystagmus after the method usually practiced by the otologist, how upon looking intently to the left there is manifested a spontaneous nystagmus to the left, evident in both eyes; furthermore, this physiologic nystagmus is not purely horizontal, but mixed in character; that is, horizontal combined with rotary. Now the rotary element must be due either to a secondary action of the horizontally acting muscles or the combined play of these with the obliques, the superior of one eye and the inferior of the other.

We do not make observations for spontaneous nystagmus, in the study of ear cases, with patients looking to the side. We try to eliminate as much as possible any strain on the extraocular muscles.

DE WAYNE HALLETT, New York, N. Y.: A paper like this can be commended because it reduces an anatomical study to a machine, and these demonstrations of movement can be registered in figures that we can put down on paper and study. If the instrument represents the actual state of the muscles, some definite facts are accumulated and put down for future anatomical determination of the real facts. We should commend the scientific efforts of Dr. Suffa in research work.

It is exceedingly hard to digest his facts and figures without having a chance to sit down quietly with him and the machine.

ALBERT E. CROSS, Worcester, Mass. (In the chair): I think we all realize that a technical paper could have been discussed better if every member could have read it before the meeting. However, you have all heard it and asked questions.

GEORGE W. McDOWELL, New York, N. Y.: Do I understand that the external rectus is attached 46 mm. from the cornea?

A. B. CLAPP, Muscatine, Iowa: What more action was given a muscle by the larger contact arc? I mean that the muscle having a greater contract arc has greater activity than one of lesser contact.

DANIEL W. MILLER, Blackwell, Okla.: In a study of the action of these muscles, have you observed that it changes the contour of the eyeball? In other words, does it produce an astigmatic effect or change the amount of astigmatic effect in these actions?

J. R. MCCLEARY, Cincinnati, O.: Explain the anatomical position. Has he tried to demonstrate insufficiency of the external rectus? What does he base his conclusions on?

DR. SUFFA: Will say in answer to Dr. Hallett that he did not have the paper long enough to digest it. Dr. Mackenzie received a partial copy two weeks ago. Dr. Bentley wrote me about discussion and I said it was wiser to put only one man on because of the technical nature of the paper and because the paper would be late, and that a preliminary section of the paper could be sent to one discussor, but not to two.

DE WAYNE HALLETT, New York, N. Y.: I do not wonder the Society did not fully comprehend the paper. I did not digest the paper fully, but I am not sure that the length of time had anything to do with it.

DR. SUFFA: It makes no difference whether you have a long or short contact arc in the recti muscles; in the principal rotations, force is at contact and at right angles to the centre of rotation, and in normal rotations contact is always present; when we come to their accessory action and torsional effect larger contact arcs have correspondingly greater action, an important consideration not fully recognized in operative displacement of the attachment of the recti muscles. This is especially true in backward displacement of the internal rectus

by tenotomy, as the normal contact arc is not over 7 mm., which is needed in extreme inward rotations and in downward version as accessory to the inferior rectus muscle.

In regard to Dr. Miller's question whether a phoria would have an effect upon astigmatism—I believe it does have an effect. To overcome a phoria muscle contraction is necessary, and I also believe it tends to increase myopia. What is your opinion, Dr. Mackenzie?

G. W. MACKENZIE: Yes, that is where we get our myopias.

GEO. A. SUFFA: One other point I wanted to bring out is that it is very difficult to visualize by text-book study the action of the extraocular muscles. But with the ophthalmotrope it is easy; you can do more in one hour with the ophthalmotrope than in a whole season's study of books. If we ever meet near Boston I shall bring the instrument and demonstrate this point.

J. R. MCCLEARY: With the insufficiency you always have a relative weakness of the internal recti muscle. Whatever the cause there is always a relative weakness of the internal recti. It is through training the internal recti that you get the benefit. In all cases I always measure carefully abduction, adduction, circumduction and subduction. I want to give a caution in measuring circumduction and subduction. These ductions normally are but from 1 to 3 deg., and there is a tendency to retain the duction in the eye under test; consequently it is necessary to allow an interval to relax the active muscles before taking the vertical ductions on the other eye in order to obtain the actual condition.

PRESIDENT: I think I had a bright thought; next year we meet in Cleveland; in 1920-1921 we meet in Boston, I understand. Now if Dr. Suffa will prepare a paper at that time and have his instrument ready for exhibition and will send me a copy of his paper a month or so prior to that meeting I will be glad to have reprints made at my expense and sent in advance to each member so we can all study it and come to Boston in a physical and mental condition to absorb the most out of Dr. Suffa's instrument. I make that proposition.

RESULTS OF THE DOWLING TAMPON IN NASAL WORK IN ARMY HOSPITALS.*

BURTON HASELTINE, M. D.,

Chicago, Ill.

I HAVE nothing new to say in regard to the Dowling tampon, except that I have been able to make comparisons in the army between this method and those commonly employed in dealing with nasal infections. First, I wish to say something about the clinical importance of obscure and chronic ethmoid infections. We have talked a great deal about this in this Society and discussed its relation to the general health, but it has been even more striking to me in my military experience. I have examined such a large number of men who are not supposed to have any nasal pathology, and the number of these showing low grade posterior ethmoid infections is surprisingly large. We should learn to look particularly at the posterior wall of the pharynx, elevating the soft palate with any instrument that will pull up the uvula, and look by direct inspection as far as possible upward at the posterior wall of the nasopharynx. You do not always see the discharge coming down and you may not catch any exhibit of mucopurulent discharge there, but in cases of a chronic nature you will see a slight change, similar to what we called pharyngitis sicca in old days. I always pass such patients aside for further study and usually find a greater or less degree of posterior ethmoid infection. They are studied with the nasopharyngoscope and with application of the Dowling tampon.

Among many cases I will cite one as illustrative of the importance of this clinical symptom. One man had been in the isolation ward for 110 days as a diphtheria carrier with nothing else the matter with him. At two-day intervals he had positive "dip cultures" from the pharynx. He was sent to me with the suggestion that I remove his tonsils. He had very little tonsil tissue to remove but he had this same ethmoid condition, with dirty discharge from posterior nasal spaces.

*Read at the meeting of the O., O. and L. Society, Asbury Park, N. J., June 1919.

We made no operation but treated him carefully with Dowling's tampon. It took seven days to get the first negative culture in his case. On the ninth day we got the second, and on the eleventh the third, and on the fourteenth day the man was released from confinement and went to duty.

The use of the argyrol tampon was particularly gratifying to me in the army, as there is no comparison in clinical results between this method and anything else available to the army surgeon. Particularly in the epidemic of grippe where the infections were largely nasal, we had an epidemic of sinus conditions. This particular infection seemed to involve the frontal sinus and the antrum rather more frequently than the ordinary infections did. The use of this tampon and nothing else attracted attention in a large army hospital, because of the results achieved.

We speak about whether we use argyrol or silver nitrate. We cannot substitute one for the other. In an ulcerating surface of the mucosa, or in the tonsil crypt where you are trying to clean out infection I do not think argyrol is worth much. Silver nitrate is the thing to use here in reasonably good strength. Silver is for a broken surface or for a necrotic mass that is accessible. Argyrol is for use in inflammatory conditions where the mucous membrane is not destroyed or broken. The infection is not on the mucous surface, but beneath, and a surface application of anything is of no particular value. The whole principle of the colloidal silver in tampon is by osmosis; it goes through the mucous surface into the submucous and acts on the tissue beneath. It acts upon the submucous infection, depletes the swollen edematous area and promotes the natural normal secreting function of the glands. The results are only obtainable by prolonged contact. I frequently leave the tampon for an hour. I do not cocaine the nose because it is quite unnecessary if one is gentle and precise, and it is better not to limit the circulation in the tissues. I believe that we still can do no better than use argyrol, although many substitutes have been suggested.

DISCUSSION.

J. I. DOWLING, Albany, N. Y.: Dr. Haseltine's saying that no one in the army had ever heard of the Dowling tampon reminded me

RESULTS OF THE DOWLING TAMPON IN NASAL WORK.

of a man who consulted me one day, after having been treated previously. "Do you still use your tampon method," he asked? "I never had so much relief from any other treatment as I have had from it." I said, "Thank God, you did not fall into the hands of one of my friends or I might never have seen you again." They know how to use this method. The strength of the solution is 10 per cent.; that approximates the specific gravity of the discharges, and I believe it acts better in that way. My experiments have proved it. Do not use cocain; the tissues shrink and you may injure the mucous membrane and occasion trouble.

I have been interested to compare this method with the various methods of draining the sinuses by suction, and I suppose being father of the child I like my child better than the other man's child; I certainly have been able to demonstrate in a great many cases that the tampon properly applied, and when possible followed by the proper syringing, will absolutely drain any sinus,—frontal, ethmoid or even sphenoid. In the diagram it enables me to put down a plus for positive, or as many as I want. The tampon comes up above here. You can't get it out of the superior turbinate. It does not reach any of the points of exit from any sinus, but it does approximate near the final tissue at this angle,—it approximates the infundibulum. It induces sneezing and drainage by osmosis.

The tampon having been left in and spitting blood having accomplished the results, you enhance the results by flushing the nose; and here I fall back on the bowel syringe with nice big tubing; insert it in the nose, directing flow towards the floor and away from the septum so as not to injure septum. At this point you frequently find ulceration. I do not believe that the average ulcer of septum is due to picking of the nose. It comes from infected materials being drawn from the nasal ostium and then dried. It is that little dry material which the patient picks off that occasions the ulceration. That I have learned to look upon as a diagnostic point of antrum disease, even when it transilluminates normally. The flushing of this volume of water thrown into the nostril should be directed through the nostril which is least pervious. If one nostril is more obstructed than the other then wash through this nostril first. I use a large two-ounce "Matchless" syringe. I suppose some of you try to flush out the

antrum through the natural ostium. Personally, I do not believe anything is gained from it. It is not reasonable. The instrument I use for that purpose is a large trocar devised by a Chicago man. I think his instrument beats anything I have ever seen. Remember the time limit, the percentage—10 per cent., and flushing of the nose, and—even in the absence of the flushing, you get such a tremendous effect that patients will experience great relief.

Coming to my own family, I tamponed my wife occasionally for an acute cold, but if I flush her nose she has such extreme pain through the eyes and ears that she thinks flushing should be disregarded for everybody. It happens that flushing of the nose is good in the majority of cases, but does not apply in all cases. You get your drainage through capillary attraction through the affinity of one colloid for another because these pathological discharges are colloids.

The description of the tampon is an old story. I use a little wire probe like that. Sometimes it has four sides and sometimes only three sides. I prefer the one with four sides without any of the serrations at the end. The cotton protrudes from the end and the tampon is inserted as far as possible with the final direction towards the infundibulum. As to decolorizing, which takes place, that is an evidence of infection. It does not tell the kind. It indicates infection is present. You can make use of that as a diagnostic measure.

A. B. CLAPP, Muscatine, Iowa: Am I doing wrong in adding glycerin to the mixing solution of argyrol? It seems to me I get better results when I use half-and-half argyrol-glycerin solution in mixing. Am I right or wrong? Is it a mental effect?

J. I. DOWLING: That accomplishes the result in a certain degree, but alters the specific. I tried that in making my experiments and I rely on the 10 per cent. without the addition of glycerin.

A MEMBER: How do you regard silvol?

DR. DOWLING: I have not used silvol. When I find a thing that does good I do not care if authorities say it does not.

DE WAYNE HALLETT, New York, N. Y.: I think it is perfectly wonderful in the proper case. I would ask Dr. Dowling if he has used the preparation of Squibb under the trade name of Solagenum, which, according to their recommendations, is identical with argyrol

RESULTS OF THE DOWLING TAMPON IN NASAL WORK.

for all therapeutic purposes and differs in one important effect, that it is not hydroscopic.

DR. DOWLING: I have used that. I buy argyrol in four or five dozen ounce-bottles at a time. The only thing I have gotten from the argyrol people is one dozen argyrol which I used in the clinic.

G. W. MACKENZIE, Philadelphia, Pa.: I have used argyrol for a long time. Some years ago I hesitated to accept the conclusions of Dr. Dowling. After having given argyrol a trial for a number of years I became sufficiently convinced of its efficacy to adopt it as an almost routine measure. In Fuch's clinic silver nitrate was preferred to argyrol or protargol in an eye where there was purulent secretion. Silver nitrate will work successfully in some cases where there is secretion, and will not work at all in others, and so in my experience with argyrol it will generally work very nicely if used properly and after the method of Dr. Dowling. Dr. Haseltine, in the course of his remarks, spoke of acute, possibly he meant subacute or chronic empyemas. I doubt that we get quite as favorable results in the acute as in subacute inflammatory conditions.

I see no objection to using cocain for its shrinking effect. Argyrol does good work when it does so by sterilizing more or less the area with which it comes in contact by oxidizing the secretion and the infecting organisms; furthermore, it aids in shrinking the parts and especially the mucous membrane about the ostium of the particular sinus affected. By shrinking with cocain first we are able to apply the tampon nearer the ostium of the affected sinus than otherwise. In making an application of cocain to the nose we endeavor to shrink the tissues sufficiently to be better able to keep the part under our vision and at the same time permit us to use the smallest pledgets, reaching the farthest recess. It may be that the cocain possibly alters the effects of the argyrol, but of that I am not sure.

I have seen such excellent results with argyrol in intranasal and accessory sinus inflammations that I wish to endorse it. At the same time, there are rare cases in which it may be contraindicated. In the majority of cases where argyrol is used following cocain, I find the parts are shrunken and the nasal cavity is more patulous and for a longer time and with less reaction following than when either is used alone. In the very acute cases I find the mucous membrane of the

nose is prone to be more swollen and red after the use of argyrol than before treatment. For just what type of case the argyrol is best suited I am not yet decided. My aim has been to find out the particular bacterial infections to which it is fitted. In this I may be entirely wrong; other features may be more important. We know that zinc is almost a specific for certain bacterial infections where argyrol fails; for instance, the Morax-Axenfeld bacillus.

In the treatment of intranasal and sinus infections argyrol generally works very well if properly used, but not always. The question naturally arises, why does it not give uniformly good results and what is the best agent, short of an operation, to use where argyrol fails. Since I do not use argyrol exclusively in the treatment of any case, I am at a loss to know just how much of the results in favorable cases is to be credited to it alone. Some credit must be given to the cocaine by reason of its shrinking the tissues; some to the internal remedy administered, and last but not least, to the self-limiting effect of most infections together with the normal vitality of the patient, which thanks to providence, often pulls us out of the hole in spite of what we have attempted. After considerable experience I feel justified in acknowledging that my results generally have been much better since adopting this plan of using argyrol quite uniformly than it was previously.

THE PRESIDENT: Our time is growing short, but I feel that I would be extremely ungrateful if I did not take this opportunity to give full expression of my appreciation of the Dowling tampon method. Seven years ago I went down to Albany prepared to have an operation upon my ethmoid cells. I felt they were incurable and had to be curetted out. To my surprise Dr. Dowling refused to operate upon me. He handled me much as we often have to handle patients who come in ready for an operation. I saw him in the evening and he said, "There is considerable congestion," and applied his argyrol tampon. The next morning I felt somewhat relieved. I went down, he said, "Suppose we put another treatment in there this morning." Of course, I said, "All right." At the same time I was growing impatient and I wanted to get home for Christmas. I felt if I were going to have an operation it should be done. Then another treatment. He said, "Doctor, let's have an x-ray to-day." We had it. The next morning when I rose

RESULTS OF THE DOWLING TAMPON IN NASAL WORK.

I had very slight discharge. The x-ray plate showed nothing purulent. By that time I was ready for what he had to say. "You have simple infection of the ethmoids, no necrosis. I would not have an operation." Seven years ago last December, and I still have my ethmoids and no discharge.

That visit of four or five days was the most satisfying and profitable time that I ever spent. I took home with me a method which turned the treatment of the class of cases referred to, which had been very trying and unsatisfactory, to the most pleasant and profitable thing I do in my office. Before that when patients came in with sinus infection I almost dreaded to meet them. I used to spray a little cocain and shrink them down. They went out. The astringent reaction proved more uncomfortable than their first state. Since that time I know very well what I can do for them. As the doctor says it simplifies the practice of medicine so much. It simplifies it so much that I would not treat the diseases of the nose if I were to be deprived of Dr. Dowling's tampon. It is not often I can criticise Dr. Mackenzie. The reason this young man is wavering in his opinion of the effect of argyrol is because he first uses an astringent. I solved it for myself in this way. According to my own explanation the astringent closes the mouths of the mucous glands, puckers the mucous membrane down and confines the infection where it lies so that the argyrol is impotent to accomplish its full results. If argyrol is applied without astringent, by osmic action all is drained out, whereas when the astringent is used the patient is only partially relieved. The action in eustachian obstruction and upon the structures of the eye make altogether the most far-reaching therapeutic method that I have ever witnessed. I think the profession owes a great debt of gratitude to Dr. Dowling for the discovery and his great liberality in exhibiting his method to all who are interested.

NEIL BENTLEY, Detroit, Mich.: With all due respect and honor to the distinguished author of this tampon, I do think that it is the dirtiest, nastiest thing that I use in my office, but the fact that I have used it for years and expect to use it for years in the future is the best testimony of how much I value it. I know of nothing I hate to use more. I can't have them sitting around forty minutes or an hour; I haven't the time and can't give them the room. I have used

this method of putting in the tampon, tying a string to it, on the other end tying a small wad of cotton. The patient is wished good-bye and instructed to pull out the cotton in 30 or 50 minutes. This method gets them out of the office, but the efficiency of the method is beyond dispute. With all due respect to the men who would not use cocain, I do frequently use cocain. The procedure I use frequently is the spraying of a one per cent. solution of cocain with 1-10,000 adrenalin. My assistant douches the nose, sprays with this solution and then waits five minutes, when we apply suction. Then after again flushing the nose we apply one of the argyrol tampons. I have never noted any detrimental effect due to applying cocain.

DR. DOWLING: In regard to rose cold and hay fever, I avoid them. I go away. Many patients have told me that I have cured them. If the patients think I have I accept it as a part of their good will and let it go at that. I put them always in the hands of an assistant, or somebody who wants them, and I leave. The acute cases you can relieve very speedily. I had a patient come in, one of our judges; he was having treatment over a long period of years. He had a subacute condition, but acute exacerbation. He was practically cured.

DR. D. W. MILLER, Blackwell, Okla.: How frequently in these acute cases do you advise tamponing?

DR. BURTON HASELTINE, Chicago: The technic is important. So far as I know no man who has tried this method as we heard it described to-day, has continued to use the old methods.

Physicians are some of them so pleasing and conformable to the humor of the patient, as they press not the true cure of the disease; and some other are so regular in proceeding according to art not for the disease, as they respect not sufficiently the condition of the patient. —*Bacon.*

REPORT OF AN EAR CASE TREATED WITH CHAMOMILLA.

W. G. SHEMELEY, JR., M. D.,

Philadelphia, Pa.

“ANY drug is homeopathic to the symptoms it will cause.”
How often in this day of hard concrete facts do we lose sight of this great truth. As the modern trend of medicine is more and more toward specialism, and justly so, it seems that little by little a departure is made from the proper method of homeopathic prescribing, and slowly but surely the specialist comes to be a clinical prescriber.

Of course, there is a reason for this tendency, for as the specialist's field becomes more and more confined within certain limitations, he gradually loses the finer collateral symptomatology without which there is no such thing as a homeopathic prescription. The day will come when there will exist in every group of physicians a skilled prescriber to whom will be entrusted the selection of the proper remedy for each and every case under treatment. No specialist in any other given line of medicine can do more than touch upon the edges of homeopathic prescribing.

Speed the day when the homeopathic internist shall take the place as a specialist that by all means is his!

As a further argument for this the author would cite a case in which the indicated remedy appeared to be Chamomilla, and which remedy, when prescribed, produced a marked relief in other conditions which would seem to be beyond the scope embraced by this remedy. This case is offered not because one case proves anything in medicine, but because there may be a few who have lost faith, and a result such as this may stimulate them to further work and investigation.

A patient, Mrs. B. R., visited the office on October 30, 1919, presenting the following history: Five or six years ago a swelling formed back of the right ear, with slight pain, but she does not remember having any discharge from the ear at this time. Hearing was not disturbed. Her family physician pronounced it a “swollen gland.” It

was painted with iodin several times. At present the patient notices that when she is fatigued the spot hurts worse. For the past three weeks she has had a throbbing sensation more than pain. This keeps the patient awake at night. Hearing is not disturbed in the right ear. At times she seems to have excessive amount of soft wax in the right ear canal. At other times she seems to have a film or cloud come over her hearing in the right ear. Swelling behind the right ear varies in size at different times.

Examination: Slight dermatitis in the right external canal, with excessive amount of soft brownish cerumen. Membrane is intact, brilliant, slightly opaque, but the long process of the anvil is visible. No retraction. Normal mobility with Siegle otoscope. Left ear, same findings as right, with the exception that the external canal is normal.

External Findings—Right Ear: Retroauricular swelling circumscribed painful on pressure; periosteum is normal.

R. Ear		L. Ear
8m. +	Conv. Speech.	8m. +
4m. +	Whisp. Speech.	4m. +
	Akumeter.	
	<hr/>	
	Weber	Indif.
Norm.	Schwabach	Norm.
+ 37"	Rinné	+ 25"
Norm.	Air	Norm.
	<hr/>	
Norm.	CI	Norm.
Norm.	c4	Norm. to 2" sh.

Lassar's Paste was first prescribed, to be used externally in the canal of the right ear. Belladonna 3x was prescribed internally. On November 6th patient reports slight relief, but she seems to be very fretful in temperament. Same treatment prescribed as on former visit. On November 12th fretfulness increased. Feels as though she must move about. Recurrence of former symptoms. November 22d, patient reports that the ear had felt all right up to November 21st, when she had a recurrence of former complaints. Because of a tendency to formation of crusts in the canal of the right ear, Graphites was prescribed internally in addition to the use of Lassar's Paste externally. Patient still has the same fretfulness present. On November 24th this symptom of fretfulness being so pronounced, together with the fact that the pains were of a tense darting nature, worse at night, and that

REPORT OF AN EAR CASE TREATED WITH CHAMOMILLA.

the ear felt hot to the touch, Chamomilla was prescribed. Two days later the patient reported marked relief from her symptoms and has remained free from them ever since.

Under ordinary conditions one would scarcely think of prescribing Chamomilla for the ear condition above described, but in view of the fact that the patient's temperamental condition stood out so prominently, the remedy was chosen with the happy results mentioned.

1831 Chestnut St.

Clapp and Martin, *J. A. M. A.*, May 1, 1920, are using a 2 per cent. solution of Young's remedy, **Mercurochrome 220**, as a germicide in ophthalmia neonatorum, and report a number of cases with a marked result.

CEREBRAL ORIGIN OF STRABISM AND ITS TREATMENT BY COMPLEMENTARY COLORED GLASSES.*

DR. CH. SAUVINEAU,

Paris, France.

A. THE deviation of one of the eyes is such a characteristic symptom of strabism that it has been identified with strabism itself. It is, however, but a secondary symptom, and can disappear without the affection being in any way modified.

Great efforts have been unsuccessfully made to correct the squint in the eyes, either surgically or by providing glasses for constant wear, and for this reason—that the causes of strabism reside elsewhere than in the ocular apparatus, properly so called. They are of cerebral origin, as was proved by Javal and Parinaud. But they are still imperfectly known, and hence so many who squint are not cured.

Strabism, according to Parinaud, is a disturbance of the convergence, preventing the visual lines from uniting on the fixed object. But this disturbance of convergence is itself but an effect, the cause lies still deeper.

What constitutes, indeed, the very essence of strabism is an hereditary, cerebral soil of such a nature that the brain of the person who squints perceives, by his cortical visual centres, the visual image furnished by one eye alone. *Every subject with a squint is a one-eyed person, cerebrally speaking.* *

It is not because the eye with the squint is amblyopic that the cerebral vision is monolateral. Very frequently there is no amblyopia, and sometimes both eyes are equally good. But, nevertheless, the cerebral visual perception remains always monolateral. The brain makes an abstraction or neutralization of the image furnished by the eye that is not straight.

This neutralization was observed by Javal, and more recently by Rémy. But neither of them grasped the fact that this cerebral ab-

*Taken from the Official Report of the Academy of Medicine, Paris, June 10, 1919. Translated by the author.

traction is *constant*, and is the primary, *pre-existing* cause of strabism. Indeed, on the contrary, they make it a consequence of the strabic deviation. In their opinion the subject's brain would, somehow, psychically neutralize the image which is deviated—to avoid diplopia. But why is that never produced in muscular paralyses where diplopia is so troublesome? Because the latter are produced on subjects whose brain does not usually present the defect necessary for the production of strabism.

The tendency to cerebral fusion of the visual images of both eyes, so strong in normal subjects, is non-existent or weak in strabic subjects. And it is this disposition handed down, in our opinion, hereditarily, which seems to be the true cause of strabism. When it exists the slightest obstacle to the binocular vision,—a leucoma, an ametropia, will suffice to produce strabism. On the contrary, when it is absent the most troublesome optical causes are powerless to produce it.

To sum up, in the true strabism (for we must put aside the insufficiency of convergence with latent diplopia, which is only a pseudo-strabism) the fundamental notion to be borne in mind is that *every strabism is equivalent to a monolateral cerebral vision*.

B. The treatment of strabism follows rationally from this notion. It does not consist in rectifying the eyes, but in re-establishing the cerebral binocular vision. The rectification of the eye that squints will come as a necessary consequence, and all relapse will be rendered impossible. To this end two indications must be successively followed:

1. To transform the monolateral vision into a simultaneous one; that is, to train the visual nervous centres simultaneously to perceive the images furnished by both eyes, and therefore as one eye squints to produce diplopia.

For this purpose I use two complementary colored glasses, one green, on the good eye, the other red, on the eye that squints; and setting the patient before a luminous point (a perforated screen before a candle) I make him admit that the red flame is not perceived by him except when the good eye is covered.

The successive closing of one and then of the other eye brings the patient—more or less rapidly—to simultaneously perceive the two

images; that is to say, the subject who saw only a green flame gets at the same time to see a second one, red, more or less distinct.

2. It remains to transform the simultaneous vision into a binocular one; that is, to produce the cerebral fusion of the two images—green and red—in a single image of mixed color which can easily be recognized. (This really would be white if it were possible to have the colored glasses strictly complementary—green and violet-red.)

To do this the patient is invited when guided by the luminous points green and red, to relax or contract his convergence, according to the case.

If the strabism is weak the subject quickly obtains the fusion. My clinical experience has proved that even strong strabisms of 30° to 40° can be cured by this procedure, and in less than three months.

However, in these strong strabisms, where the colored objects are fairly distant from each other, it is better to graduate the subject's efforts by the help of prismatic glasses.

With a properly fitted prism the two images, green and red, are brought nearer to each other, to a distance of some centimeters. The patient then easily unites them. Afterwards the strength of the prism is diminished progressively until the fusion is made without the aid of prismatic glasses, and the binocular vision is thus re-established.

This method is evidently to be recommended on account of its great simplicity. A single red glass, as in the diagnosis of paralyzes, would be still simpler, but then there would be far more room for errors. The complementary colored glasses are much better. The cure is obtained *in all cases* (for amblyopia is no longer an obstacle) within a few weeks or months at the most.

The suppression of all apparatus and the simplicity of the technic enable doctors who are not specialists to use this method with the greatest ease in districts where oculists cannot be found.

'Tis an old maxim of the schools,
That flattery's the food of fools;
Yet now and then your men of wit
Will condescend to take a bit.—*Swift*.

ABSTRACTS.

Epidemic (Lethargic) Encephalitis.—Clinical Review of Cases in the Pacific Northwest (Portland, Oregon). William House, *J. A. M. A.*, Vol. 74, No. 6. Under "double vision" the author states that this was present in eleven cases. One patient first complained that while driving a team of horses he had never seen the automobiles so crazy. All of them wanted to run over him. Double vision was present for four or five days during the first week. The author states that this point alone should differentiate the disease from tuberculous meningitis, in which double vision seldom appears before the end of the second or the beginning of the third week. The author thought that there was a tendency for the eye to rotate back to the middle line when directed to the right or left by the patient. He considered the condition a general ophthalmo-paresis rather than ophthalmoplegia.—*H. L. Gowens.*

Professional Directory

"Up-To-The-Minute Index" For Quick Reference

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Editorial

CHRONIC MIDDLE EAR SUPPURATION—ITS CAUSE AND CURE.

THE above title was suggested as the logical one for an editorial to follow the preceding three on "The Need for Critics," in dealing with exaggerated claims,—especially the last one, which pointed out the fallacy of the claims made by three noted otologists concerning the results they had obtained in the treatment of chronic middle ear suppuration with the particular form of treatment each was advocating. No attempt was made to discredit the form of treatment practiced in any instance, but merely to criticise the exaggeration of the authors, which does harm by misleading the novice as well as others into accepting as bona fide that which is counterfeit. The practice of exaggeration is not limited to the field of otology; it is quite as evident in other branches of medicine. Lest our honor be assailed from without let it be known that exaggeration is no more common in our own than in other professions. And when it does occur in our profession it happens more often as a result of over-enthusiasm, which leads to a form of self-deception, than to any ulterior or selfish motive on the part of the one putting forth the claim.

No doubt every claim, no matter how extravagant it may be, has some foundation in truth; the foundation, however, is often too weak to support the superstructure and the latter must sooner or later fall to the ground. The truth lies buried in the débris until some seeker for knowledge, it may be a long time after, ventures to uncover the mass, and discovers the truth hidden beneath. In this manner many truths are lost for long periods of time. When Dr. Nagle magnified so wonderfully the results that she claims to have been able to obtain with the use of vaccines in the treatment of chronic middle ear suppuration, results so far beyond those which anyone since has been

able to approach, she, though unaware of it, was helping to bury whatever there may be of truth underlying the principles of vaccine therapy. Many who are able to discern the exaggeration are not content with merely discounting her claims, but go so far as to deny the truth of everything she has to say, and thereby relegate to oblivion as valueless this particular form of therapy so far as its application to chronic middle ear suppuration is concerned.

The vaccine treatment of chronic suppuration, including that of the ear, has lost some of the reputation it held a few years ago, not on account of Dr. Nagle alone, but because it has not fulfilled the promise held out by her and other enthusiasts like her. There is the possibility that one of these days it will be dropped altogether. If this should come to pass, as present signs seem to indicate, the blame must fall on those over-enthusiasts who exaggerated its value in the beginning.

Taking account of stock at this time, what do we really know about the action of vaccines? To be candid, not a great deal. However, we do know that vaccination with cowpox virus prevents smallpox; that injections of typhoid vaccine prevent typhoid fever. No one can deny the truth of these two statements, for the evidence is overwhelming. On the other hand, has anyone yet presented evidence of the curative property of either of these vaccines in the treatment of their respective diseases comparable with their known prophylactic qualities? Every now and then reports of isolated cases or small groups of cases appear in the literature in which the results would seem to indicate to the one reporting it that a particular vaccine has shortened an attack of suppuration. But the cases reported are almost always those of acute conditions which might have cleared up just as well without the use of vaccines. In fact, quite often we find abortive cases in which it is not easy to tell just what particular factor was the one to bring about such results.

Every physician who prescribes homœopathically—and by such is not meant every so-called homœopathic physician—has duplicated results with the use of the homœopathic remedy comparable to the results claimed for vaccines. That vaccines can act beneficially in some acute suppurative conditions is admissible, but the percentage of such cases is not so large as we had hoped for. In the chronic suppurations no one yet has reported beneficial results from the use of vaccines, even in a very small percentage of cases, except a few of the

less careful observers in the beginning of their experience. Too often the reports were no reports at all, but merely statements—the observer's say so—no effort at details having been ventured. At the present time the use of vaccines for chronic suppurations is being abandoned more and more. The outlook is not favorable so far as the continuance of this form of treatment is concerned; nor is it to be wondered at if one considers carefully all the factors that enter into the etiology of chronic suppuration.

We should be careful not to go to the other extreme of discarding entirely this method of treatment, for it seems reasonable that a remedy which is capable of producing symptoms so like the actual disease as a specific vaccine does, and which also is capable of producing an immunity against the disease, ought to be capable of curing the disease when it is present. The fault would seem to lie not so much in the principle involved as it does in the preparation of the vaccine, the size of the dose, the interval of dosage, or some other fault not yet understood. (*Continued next month.*)

G. W. M.

A NEW JOURNAL.

Under the patronage of the "American Optical Company" appears a new quarterly, the *American Journal of Physiological Optics*, which in its first number makes a most auspicious start. All the articles are readable and instructive, especially that of W. W. Coblentz, Ph. D.,—"A Comparison of Photo-electric Cells and the Eye." The new journal is commendably free from any propaganda or advertising of its sponsor, who is to be congratulated upon his taste and his altruistic effort.

D. M.

NEUROLABYRINTHITIS SYPHILITICA FROM ANOTHER ANGLE.*

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HAVING recently prepared a paper on "Neurolabyrinthitis Syphilitica" for the A. M. A. meeting at New Orleans, the excuse for preparing a second paper on the same subject so soon after the first is the vastness of the subject and the desire on the part of the writer to present it from another and closer viewpoint; hence the title of the present paper.

To Hutchinson above all others we are indebted for the knowledge we possess of the clinical aspect of syphilis of the eye and ear, a knowledge without which many mistakes in diagnosis would be possible in spite of our more recent knowledge of the complement fixation test. His observations and deductions have since been amply verified by every investigator in this field of research. For a half century practically nothing new has been added to his clinical observations and surely nothing subtracted.

During the last ten or fifteen years the discovery by Schaudin of the *Treponema pallida* and by Wasserman of the specific serum reaction test for syphilis has advanced our knowledge substantially so far as the laboratory diagnosis of syphilis is concerned. Without attempting to underestimate the value of these discoveries it must be conceded that for awhile at least there was a tendency to overestimate them, especially the Wassermann reaction. At the present time the profession is quite unanimous in its opinion that while a strongly positive Wassermann indicates the presence of syphilis in almost every instance, a negative Wassermann should not be accepted as evidence of its absence, even in a fair proportion of cases of late syphilis. Browning and Cruickshank found it negative in fifty per cent. of latent syphilis in children.

The discoveries of Schaudin and of Wassermann just referred

*Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

to, together with those of Barany, pertaining to the physiology and pathology of the semicircular canal apparatus; the better technique for the making of functional hearing tests evolved by Politzer and his school of otologists, by Bezold and by many others, and the pathological studies of syphilitic temporal bones by Panse, O. Mayer, Knick-Zaloziecki, Asai, Moos, Oscar Beck, Gruenberg, Habermann, Hofer and others, all combined, naturally led to an awakening of an interest in and an increased knowledge of the subject of syphilis of the labyrinth and the VIII nerve on the part of otologists the world over.

Our present knowledge of syphilis, although appreciably greater than it was fifteen years ago, falls far short of what is to be hoped for fifteen years hence. Our information on the subject clinically is far in advance of our information pathologically. Much of the former is awaiting confirmation by the latter, which when obtained, will result in a material increase of our knowledge of the subject as a whole.

Syphilis of the labyrinth and eighth nerve is far more prevalent than the general practitioner, the average otologist, or even the syphilographer has been inclined to believe. When a clean-cut case is presented to the average otologist he should be keen to recognize it. The following is just such a case:

(1) History of syphilitic infection.

(2) Bilateral impairment of hearing progressing rapidly, with or without symptoms from the vestibular apparatus.

(3) Functional hearing-test findings suggestive of disease of the perceiving apparatus, especially shortened or diminished bone-conduction.

(4) Symptoms and signs of disturbance in the so-called vestibular apparatus: vertigo, equilibrium disturbances and spontaneous rhythmic nystagmus, deviations from the normal reactions to the turning, the caloric and the galvanic tests.

(5) Negative otoscopic findings, so far as the external and middle ear is concerned.

(6) Positive Wassermann.

With the above history and findings there can be little doubt of the presence of a syphilitic affection of the labyrinth and eighth nerve.

If antiluetic treatment is instituted, as it should be in a case like this,

and there follows a marked improvement in the hearing, as well as in the general condition of the patient, the diagnosis is confirmed.

The case just cited is so typical of its class that it would seem next to impossible for anyone to make a mistake in the diagnosis; nevertheless, mistakes have been made in just such cases, and occasionally by otologists. Granting this, what about that larger number of atypical cases? It is with some hesitancy that mention is made of the fact that at least twenty-five per cent. of the cases that have come to the writer on account of impaired hearing due to syphilitic affection of the labyrinth and eighth nerve, where they have been previously treated by an aurist, the treatment had consisted of Politzer inflation, pneumo-massage or methods directed toward the middle ear or the eustachian tube; while the Wassermann test had never been made nor antiluetic treatment administered.

This condition of affairs reflects less upon the meagerness of the information at hand than it does upon the individual who has failed to make use of that knowledge which is available. In order to show the possibilities of error in diagnosis, even in the apparently easy case already cited, let us consider the several factors of the case in only moderate detail. The case represents one of the commoner forms of neurolabyrinthitis that occurs during the late secondary stage of acquired syphilis.

(1) The history of syphilitic infection was the first-mentioned factor. This is very unreliable in a large proportion of cases, for the reason that no patient is anxious to confess an error; furthermore, ignorance of the possible connection between the syphilitic infection and the deafness may prompt the patient to conceal the truth about the former; the delicacy of the question in the case of females prevents us from taxing them too closely for an answer. Occasionally the initial lesion is of so minor a character as to be overlooked; in some few cases the initial lesion has been so obscured as to be misdiagnosed chancreoid by the attending physician; intra-urethral chancres are not infrequently overlooked or misdiagnosed as Neisserian infection; likewise innocent infection is not infrequently overlooked by the patient or misdiagnosed by the physician. Fortunately, the evidence of generalized syphilis aids materially in clearing up the diagnosis in cases of doubtful history. However, the value of the secondary manifesta-

tions as an aid in diagnosis of the general character of the disease is frequently lost to us, because as a rule they have had time to clear up materially before the onset of the aural symptoms; again the secondary manifestations may be so slight in some cases as to be entirely overlooked. We should not lose sight of the possibility of error in the opposite direction, especially in the case of the syphilophobe. It therefore becomes necessary in some cases to ignore the history and send the patient directly to the laboratory for the Wassermann test, which after all is nothing more than a confession that we put as much, if not more, confidence in this test than we do in the history. The fallibility of the Wassermann test has been referred to elsewhere.

(2) Bilateral impairment of hearing, progressing rapidly, in the absence of a definite history, pointing to poisoning from arsenic, mercury, lead, quinine, salicylates, wood alcohol, illuminating gas, or other toxic agents known to have a selective action on the eighth nerve, should cause the otologist to more than suspect syphilis, especially when emphasis is placed on the words "*bilateral and rapidly progressive*." Not all cases of syphilitic neurolabyrinthitis present this symptom so typically; in some cases the deafness, especially in the more recent ones, may appear to be unilateral. Careful examination of the hearing function, however, reveals the fact that the impairment of hearing is bilateral, with the second ear showing only beginning involvement. Again, we meet cases of this class in which the impairment of hearing is less rapid than usual on account of the patient having previously taken antiluetic treatment, but in an inappropriate form or in insufficient quantity.

(3) Functional hearing-test findings, characteristic of disease of the perceiving apparatus, especially regarding the diminished bone conduction. The findings may be briefly summed up as follows: The Weber is lateralized to the better hearing ear and shorter than normal, care being taken to use as a control some one known to be free of any hearing trouble; the Rinné is more or less positive. In rare cases with very marked impairment of hearing on one side and fair on the other side the Rinné may be less positive than normal, or even negative on the side of the poorer hearing ear. The Schwabach or bone conduction in all cases of neurolabyrinthitis uncomplicated with middle or external ear disease is shorter than normal. It is needless to add

that the air conduction must be shortened. According to Wanner, Beck, Willcutt, and some others, the bone conduction may be relatively shortened without apparent reduction in the air conduction.

The findings just cited are typical of disease of the perceiving apparatus, whether of the labyrinth or nerve or both combined, but no more so for syphilis, with the exception of the last-mentioned finding of Wanner and others, than for any other disease capable of affecting these same structures. These findings establish merely the location of the lesion responsible for the impairment of hearing. Taken alone they give us valuable but insufficient data; however, when considered in combination with the second factor, "bilateral deafness rapidly progressive," a vast amount of information is revealed. For the writer it clinches the diagnosis of syphilis in spite of a negative history or negative Wassermann. If every case were as easy of diagnosis as these findings seem to indicate, we could employ a technician to take care of the details for us and render a diagnosis. The case that has been presented is not an actual one, it is made to order, so to speak, for convenience.

Because of a previously existing unilateral chronic middle ear catarrh, let us say on the left side, the Weber may tend to lateralize to that side, the worse hearing ear; worse hearing because on that side the patient has a combination of inner and middle ear troubles, whereas on the right side he has an inner ear affection only. Such cases exist for two good reasons; one is that we have met them and the other is that anyone suffering from unilateral middle ear deafness is no more immune from syphilis or its consequences than another individual who has no middle ear affection. Many other varieties just as striking as this one might be cited, if time permitted, to show it is possible to get a reversal of the Weber from that found in a pure case of neurolabyrinthitis of syphilitic origin. The variable findings of the different investigators concerning the Rinné were so ably presented by Dr. Willcutt and others at the Ear, Nose and Throat Section meeting of the A. M. A. held at San Francisco, that it will hardly be necessary for the writer to discuss this particular phase of the subject now, further than to add that even in a pure case of syphilis it is possible to get almost any character of Rinné-positive, neutral or negative, and still be right. However, it must not be forgotten that when

properly considered it becomes a very important factor. Complications in the form of middle ear disease naturally lead to more confusing findings but never to the extent that they become impossible of solution. The diminution in bone conduction, generally referred to as shortened Schwabach, is a positive evidence of neurolabyrinthitis when present, but its absence or even lengthening of the Schwabach does not exclude its presence, for in the case cited with mixed middle and internal ear lesions on the left side, and only internal ear lesion on the right side, providing the middle ear lesion predominates over the inner ear lesion as a factor in causing the impairment of hearing, the Schwabach will be at least as long as if not longer than normal. Again, because of borrowed bone conduction on the right side there can be a neutralizing effect sufficient to prevent the Schwabach from being shortened on the right side as it would have been had there been no middle ear trouble on the left side.

In view of the apparent contradiction that has just been thrown around the subject of functional hearing fork tests, the question may be asked, Do these contradictory things actually occur in practice? The answer is, they surely do and more often than they do not, and it is because of them that so many cases of neurolabyrinthitis have escaped detection. Some one might ask, Of what value are the tests if it is possible to get such irregular and contradictory findings? The answer is that the findings are not actually irregular and contradictory, but only apparently so; for if one attempts the problem with a clear understanding of the tests, with suitable tuning forks and applying a careful technique, he will be able in a case with mixed conditions to determine the nature of the complication and the degree, for which he will make due allowance, and thereby be able to determine fairly accurately the extent of involvement of the labyrinth and nerve.

(4) Negative otoscopic findings so far as the middle ear is concerned.

In the absence of otoscopic findings suggestive of disease of the conductive apparatus, viz., membrane intact, brilliant, normally translucent, no retraction or bulging, normal mobility with the Siegle and by inflation, our natural suspicion in the presence of impaired hearing would be directed toward the inner ear or eighth nerve. On the other hand, should the otoscope reveal findings varying in the least from

the normal our suspicion would be directed toward the middle ear and away from the labyrinth and eighth nerve.

The evidence presented by the otoscope although of no mean value as an aid in the diagnosis of ear conditions will at times mislead the otologist, especially those who are prone to overestimate the value of this method of examination as compared with other methods—the tuning fork tests. It is not uncommon to meet with a case where, in spite of an opaque and retracted tympanic membrane, the hearing is normal or nearly so. Conversely, we meet with cases in which the otoscopic appearances are but slightly off from the normal, yet there is a considerable reduction of hearing on account of middle ear involvement. The unreliability of the otoscopic picture in certain cases is a subject in itself and permits merely mention of it at this time. When the otoscope reveals anything in the appearance or behavior of the tympanic membrane suggestive of middle ear involvement the experienced otologist is at a loss to estimate whether the inner ear is involved along with the middle, or the extent of such involvement, without recourse to additional methods of examination. The situation can be clarified only by subjective tests of the hearing function.

Summing up briefly, deafness with negative otoscopic findings suggests inner ear or nerve involvement. Deafness with positive otoscopic findings rather suggests middle ear involvement, but does not rule out the inner ear in the absence of functional findings. Deafness with shortened bone-conduction speaks for inner ear or nerve involvement irrespective of the otoscopic findings. In other words, in localizing the lesion responsible for deafness the subjective hearing test findings alone are of vastly greater value than the otoscopic appearance alone.

(5) Positive Wassermann test. In the presence of deafness a positive Wassermann may point toward syphilitic neurolabyrinthitis but it does not hold true in all cases, for the reason that we meet many cases of middle ear disease amongst syphilitics with no involvement of the labyrinth or nerve. However, if the case happens to be one of bilateral impairment of hearing, of recent origin and progressing rapidly, a positive Wassermann almost clinches the diagnosis, but less certainly than does the combination of the progressive bilateral deafness with subjective hearing tests characteristic of inner ear or nerve involvement.

Of the three factors (1) progressive bilateral deafness, (2) subjective tests characteristic of inner ear or nerve involvement, (3) positive Wassermann test, the least important for reliability is the last mentioned. It is of still less value in those cases where the test is negative, for the reason that we find a large per cent. of cases of syphilitic neurolabyrinthitis evidencing a negative Wassermann. The test has a positive value when it is positive, but can be misleading to those who are prone to overestimate its value in cases where it is negative. One is warranted in placing greater confidence in a positive Wassermann in a particular case as an evidence of syphilis than in the history where infection is denied.

The object of this paper has been to point out a few things about which the writer feels certain, as reasonably so as one can be in subjects medical, rather than to review many things that still lack confirmation pathologically. Furthermore, the present need, basing the opinion on errors that have been witnessed, is for a wider dissemination of a few well established truths about the subject rather than an appeal to the few by the citation of the more intricate problems that lack confirmation. Depth of consideration has been sacrificed for breadth of purpose.

1831 Chestnut Street.

Malignant Antra.—The Mayo Clinic publishes an interesting series of malignant antrum cases in the *J. A. M. A.*, May 8, 1920, by G. B. New, M. D. Of the total of thirty-three, males were predominant over females in the ratio of twenty-one to twelve. The commonest type of tumor was the squamous-celled epithelioma, of which there were nineteen cases. Eight were sarcoma. The operative measures were somewhat novel; a soldering iron is used to burn its way into the diseased tissue, the point of entrance being the palate when the palate is involved, and via the Caldwell route when there is cheek involvement. Results as shown by photographs and histories were excellent, although half the cases came in an inoperable state.

D. M.

ATYPICAL TEMPERATURES FOLLOWING OPERATIONS UPON THE EAR.*

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AN operation upon the ear for any determined cause is not always a reason for anxiety upon the part of the operator, but the occurrence of an atypical temperature following such a procedure frequently taxes the surgeon's skill to the utmost in the matter of differential diagnosis. Just as no two cases are ever identical in their symptoms before operation, so after surgical interference their behavior varies between wide limits. No operation upon the ear is free from the possibility of complications that may altogether change the appearance of the after-operative pictures.

CONDITIONS OF THE EXTERNAL EAR.

Under the above heading practically the only condition that requires surgical interference is that of furunculosis. In this condition the patient may be free from fever, or he may present a moderately febrile picture. Following free incision one usually expects the patient to experience relief from pain and to have any temperature that existed disappear. If, instead of this, the sufferer complains of increased pain, or if there is found a rise of temperature, or both, the picture at once becomes atypical.

In the search for the cause of this condition what things should be suspected? First, reinfection with the production of one or several new boils; second, the possibility of a mixed infection. If the condition be one of reinfection the diagnosis is comparatively easy by otoscopic examination. The problem of mixed infection however may not be so simple; in fact, may possibly not be diagnosed until the condition is well developed, for it may in its incipient stage partake of the characteristics of a developing furunculosis.

CONDITIONS OF THE TYMPANIC MEMBRANE.

Thousands and thousands of myringotomies are performed which

*Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

occasion not the slightest amount of worry to the operator, yet a sufficient number of atypical cases occur to be worthy of mention as to their probable cause.

A case presents itself with a throbbing pain in the ear, diminished hearing, temperature, obliteration of landmarks of the tympanic membrane, evidence of inflammation and bulging. Myringotomy is performed for the relief of this condition. Instead of prompt amelioration, a condition of aggravation follows. Is the problem one of mixed infection? Has the disease penetrated to deeper structures that may require more radical operative intervention? At once a number of possibilities will occur to the surgeon; the foremost no doubt would be one of the following:

- (a) Mixed infection.
- (b) Occurrence of a complication in the external canal.
- (c) Extension of the middle ear suppuration to a deeper structure.
- (c) The simultaneous occurrence of some acute infective process, such as tonsillitis or grippe.

If the causative factor is that of mixed infection the diagnosis may be difficult, for the usual case presents a mixed infection at the time the tympanic membrane is incised. The absence of mastoid symptoms, together with the tendency of the temperature-curve to remain at its apex for a short time and then decline, plus the bacteriological picture, will serve as distinguishing features, although the latter is not always easy of demonstration.

Should the condition depend upon the occurrence of a complication in the external canal the otoscope will demonstrate its existence, and there is also less likelihood of a rise in temperature unless the condition should prove to be erysipelatous.

When the disease invades deeper structures, of which abscess of the mastoid cells is the most frequent, the picture is, as a rule, easy of recognition.

A case of middle ear abscess may have been progressing in a satisfactory manner, when suddenly the discharge diminishes or ceases. There is a sudden rise of temperature and the presence of pain and tenderness in the region of the mastoid. Early otoscopic findings will reveal nothing aside from those found in middle ear abscess, although

profuse pulsating discharge is very suggestive that the condition has progressed beyond that of the middle ear.

The X-ray will show disturbance in the mastoid cells, which may reveal all phases from a simple haziness and indistinctness of outline to actual cell-destruction. This same picture may be shown at once, the myringotomy serving only to retard somewhat the rapidity with which the condition would otherwise have developed.

The simultaneous occurrence of some acute infective process, of which tonsillitis and la grippe are the most common, will be discovered in the case of the former by the examination of the throat and in the latter by the symptoms peculiar to that condition, and a temperature out of all proportion to the condition of the ear; in fact, the ear may give the patient no trouble whatever.

There is a group of cases that occur frequently in which the outstanding feature is a peculiar persistence of symptoms. No disease ever seems to behave, in these patients, just as one would expect. In this type one usually finds some constitutional dyscrasia, most frequently tuberculosis or syphilis. A Wassermann test may serve to show the existence of lues. The demonstration of a tubercular factor is not always easy, and frequently can be reached only after the most careful exclusion of other factors.

MASTOIDECTOMY SIMPLE.

A simple mastoid operation, performed with the proper attention to detailed and careful technique, would seem reasonably free from the possibility of complications. Were every temporal bone anatomically perfect this would be true to a very great degree, but so many are variable, including dehiscences in the very young and very old, that the case which becomes atypical is exceedingly common.

Mixed infection is an ever-present source of danger, and should be guarded against by the greatest attention to aseptic and antiseptic detail. Once it has developed the patient's life may be the penalty. The diagnosis of a mixed infection is usually a very difficult matter. So many other things may occur to produce that rise of temperature with which it is ushered in. Bacteriological examination may prove of no value. The diagnosis will be arrived at, in the greater part of the cases, by the process of exclusion.

The mastoid abscess may extend to adjacent structures; the lateral

sinus, and the outer dural surface are those most frequently invaded. Again an atypical temperature may be produced by infection spreading along the course of small veins that find entrance into the lateral sinus.

Sinus thrombosis in one of its several stages produces a somewhat characteristic temperature, pyæmic, as a rule. The febrile condition is usually ushered in by a chill, and rapidly rises to 103 or 104 degrees F., and after a short interval falls to normal or below. These attacks are repeated every 24 hours, and may even appear twice in very severe cases. Since spontaneous healing in infected thrombophlebitis occurs in but a very few cases, it becomes of the greatest importance to establish a diagnosis early. The process may spread to the neighboring cerebral sinuses, but since it takes a latent course, it is, as a rule, only recognized at autopsy. Thrombosis of the sinus cavernosus may sometimes be discovered by the appearance of congestion in the region of the vena ophthalmica (œdema of the lids—exophthalmus).

Frequently there may be an accumulation of pus between the sinus and the affected bony wall, causing a perisinus abscess. This condition produces a much milder type of pyæmic temperature and may prove very hard to diagnose positively.

Extra-dural abscess is often a complication of acute suppurative otitis media, especially when of influenzal origin, since the bacillus of this disease is very destructive to bone tissue. An extra-dural abscess may be caused by an infected embolus or thrombus from one of the veins or its tributaries, in which instance it may occur without bone destruction. The symptoms of extra-dural abscess are vague; severe headache, continuous and referred to the affected side is the most reliable. There may also occur a slight rise of temperature.

Since practically all mastoid operations are performed under general anesthesia, the possibility of a post-operative pneumonia should be borne in mind and excluded as soon as an atypical temperature develops. Frequently a patient may develop grippe as a coincidental condition with the operation. This is usually a clear-cut picture and develops too quickly following operation to be confused with any of the other complications.

Again there may develop a "lingering of the temperature," in spite of the fact that the healing appears to be progressing favorably. Here syphilis or tuberculosis is frequently the underlying cause.

MASTOIDECTOMY RADICAL.

Any of the complications that may occur following simple mastoidectomy may likewise be found after the radical operation. However, from the more extensive character of the procedure certain things may occur which would be very unlikely in the less severe type of operation.

Meningitis occurs following the radical operation much more frequently than from other operated ear-conditions, since the causative factors are so much more likely to be present, such as accidental unrecognized wounds of the dura or large cholesteatoma burrowing through the bony wall.

A large cholesteatoma with a resulting extra-dural abscess may, either by external or internal pachymeningitis, lead to an infection of the meninges or break directly through these. Should the extra-dural abscess be located deep, near the pyramidal apex, it becomes especially dangerous.

The surgeon must differentiate meningitis from:

- (a) Temporal Lobe Abscess,
- (b) Cerebellar Abscess,
- (c) Sinus Thrombosis,
- (d) Extra-dural Abscess,
- (e) Sepsis,
- (f) Tubercular Meningitis,
- (g) Meningismus in other internal affections.

The attempt should be made to diagnose accurately, for its early recognition may save a life. Quoting from Ruttin on the subject of meningitis of otitic origin, "This is the saddest chapter in otology. Whenever we look into its literature—gravestones! And when an author has pulled through a case of meningitis, he underlines this happy incident as a special deed for gathering courage, like a coward who cries in a forest. Let us not deceive ourselves, gentlemen. In developed otogenous meningitis the diagnosis is the sentence of death. And nevertheless modern otology has accomplished much in meningitis. We can not often cure meningitis, but we can prevent it if we remove its immediate cause."

The fact that in a series of 525 mastoid cases 80 per cent. of them were found to have an atypical course with respect to temperature led

ATYPICAL TEMPERATURES.

the author to investigate the subject with respect to all ear-operations. The percentage proved to be so high (70 per cent.) that this paper was written in order that the subject might be brought before the profession for discussion. An apology is due the Society for the brevity of this paper, for the subject is a very large one, and in an article such as this much had to be omitted.

The author wishes to thank the Society for the privilege of presenting the paper, and especially Dr. G. W. Mackenzie and Dr. A. V. Mackenzie for their valuable advice and assistance in many of these atypical cases.

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- 1831 Chestnut St.

Recent investigations "suggest that the **hemolytic streptococci of scarlet fever** form a distinct group from the immunologic point of view. Probably the serum produced by this scarlatinal streptococcus group may prove of use in the diagnosis and treatment of scarlet fever, and eventually, perhaps, in determining the length of infectivity." Ruth Tunnicliff, M. D. (John McCormick Inst. for Inf. Dis.) *J. A. M. A.*, May 15, 1920.—D. M.

CLINICAL DEMONSTRATION OF MUSCLE AND FUSION TESTING.*

GEORGE A. SUFFA, M. D.,

Boston, Mass.

IF I talk too fast for you I will deem it a favor if you will tell me so. I would like a volunteer who has convergence insufficiency, preferably some one with beginning presbyopia. I want some object placed on a blank wall. Dr. Cross please come here and see the doctor's eyes. My custom is to question the patient first in regard to symptoms. What is the nature of the eyestrain? etc. Patient formerly had a great deal of headache and inability to use eyes at near points. Shut one eye, read; now the other. You can often form an opinion in regard to the condition the patient has by the symptoms. It is not wise to form your conclusions on these answers alone, but you can often get an idea of what form of error is present, whether muscular or visual or both. The doctor's statement indicates convergence insufficiency. The first thing,—I start by having patient look at a gas flame at a distance of 20 feet. Cover one eye with a card, patient meanwhile fixing the light with the uncovered eye—a quick movement in uncovering one and covering the other eye—noting the behavior or movement of the covered eye. Doctor says the movement is with the motion of the card—which is correct, showing distant exophoria. Prisms, base in, beginning with a low degree progressively increased in strength, are placed over one eye until motion ceases, which is the degree of phoria: 6° of exophoria and $\frac{1}{4}^{\circ}$ of right hyperphoria in this case. For the near test a horizontal line and dot on a card are used and the measurement made in the same way with cover card and prism. As a final test prisms are removed, first one then the other eye is covered and the card quickly removed while patient is fixing the dot at the reading distance; diplopia, slow adjustment of the covered eye or confusion are indications of the amount of disturbance the condition causes. In this case there is considerable confusion at the near point before vision becomes clearly established, which would

*Given before the O., O. and L. Society at Asbury Park, N. J., June, 1919.

CLINICAL DEMONSTRATION OF MUSCLE AND FUSION TESTING.

be worse with his beginning presbyopia corrected. Can you see the movement of the covered eye and the slow and confused adjustment? Care must be taken in making the tests, also in training to hold the prisms square. There is 15° of exophoria at the near point. L. E. diverges at 6", marked convergence insufficiency as you see the L. E. diverges when the pencil is at 6" from the nose.

Measurements of the various ductions I will omit and proceed to demonstrate my method of rhythmical exercise. The doctor having just finished stereoscopic training under Dr. Cross may show fatigue of the converging muscles, so that I may not at this time be able to show the usual increased adduction and convergence under my method. I usually begin with a 10 prism and increase by 5, in this case I will begin with a 20 prism base out over the right eye, requesting patient to fuse the light at 20; he fuses the 20Δ prism, I now count 20 then remove prism having patient look at infinity entirely relaxing his eye, then again count 20. I repeat over the left eye. I will increase the prism by 10Δ making 30Δ ; as soon as the images are fused count 20, remove prism, relax eyes, count 20, repeat over left eye. He does not fuse the 40Δ prism; by taking a little time he probably would fuse 40Δ , the amount he fused by the stereoscopic method. But I will proceed with the next step; patient is to look at an imaginary object in the air midway to the light, then to glide vision to the light, an increase of several degrees can often be made. The patient does not fuse the 40Δ prism in this way. I do not spend much time to force this or the previous step, but proceed with the pencil invoking the aid of accommodation. A lead pencil, preferably one with a rubber top, is slowly brought toward the patient until it is fused, then the pencil is slowly moved away from the patient in direct line with the light, the patient gliding the vision from the pencil to the light he fails to fuse. We will try again: look at the pencil, follow it as I move it towards the light, is it in line; keep your vision on the pencil, glide to the light back to the pencil again, glide to the light; he fuses the 40Δ prism. I count 20, remove prism, relaxed count 20; repeat on the other eye. He fuses the 50Δ prism slowly. I will now put the prisms over each eye, making 55Δ ; look at the pencil, fix it, pay no attention to the light: follow the pencil to arm's length, now glide to the light; he fuses, count 20, remove prism, count 20, relaxed. 60Δ

or 30Δ before each eye, fix pencil, follow glide to light; he fused quickly. Count 20, remove, count 20 relaxed. 65Δ prisms are divided between the two eyes, he fuses them readily; count as before, etc. 70Δ are fused. Count as before, etc. 75Δ are fused. Count as before, etc., 80Δ are fused more slowly. He has now fused 40Δ more than his former power, in one sitting, and you will see a decidedly increased convergence; he holds the pencil at nose, normal convergence, from an insufficiency of $6''$.

A. MEMBER: Working at the prism exercise you can say 40Δ —that is as much as they will do with one eye. Then put prisms on the other eye, and pull up a whole lot.

DR. SUFFA: Many cases will overcome more than 40Δ with one eye, but if they do not overcome them readily I do the exercise with both eyes; final results are better and quicker and greater when both eyes are exercised.

THE PRESIDENT: It is very important to see the little delicate eye movements.

DR. SUFFA: See the difference in the movement? See how much he moves now? Show your focus. Now we will take and measure your exophoria. Up and down any? Very slight. You come up to 10° before you get through, or pretty near it. He has 5, $7\frac{1}{2}$, really 9° of exophoria at the nearby point with his prismatic lens on.

THE PRESIDENT: I will just explain that Dr. Macfarlan has to leave for New York. Dr. Suffa will leave off and take up the training of the muscles when Dr. Cross discusses the paper of Dr. Wells. Dr. Macfarlan will now read his paper.

DR. SUFFA: This test is for convergence. You have good power everywhere. Convergence test, take a pencil and keep mind concentrated on the pencil. Some people can let go and some can not. In addition to these tests this is merely tests of ex-, hyper- and I also measure abduction, taking sometimes subduction.

DE WAYNE HALLETT, New York, N. Y.: Might that not be a divergent test?

DR. SUFFA: How would you treat a case of this kind?

DE WAYNE HALLETT: If high degree of convergence I do not see how you can call it a success. Your present conclusion is tentative then?

CLINICAL DEMONSTRATION OF MUSCLE AND FUSION TESTING.

DR. SUFFA: No. As a rule your trouble is with the internal recti muscles, whether divergent or convergent. There are some exceptions. You correct your convergent insufficiency and excessive abduction by training the inner muscles. If it was not mainly in these muscles you never could obtain relief by training the inner muscles.

Fontaine, in speaking of **focal infections**, *J. A. M. A.*, June 12, 1920, lays down a set of valuable rules to determine more precisely whether or not a given focal infection is the cause of the more remote symptoms. "The relation of the focus . . . to the symptom in question has depended upon, (1) absence of any other demonstrable cause for the symptom; (2) the failure to cure the symptom by all other methods of treatment, and (3) prompt and continued relief, with no return of the symptom, on the cure or eradication of the focus of infection."

In an interesting series of cases the author sustains the growing opinion that focal infection has a decided place in our science. The radical jumping at conclusions without definite cases for incrimination is to be deplored and leads to an unjust reaction that nullifies the good that has been established by the original workers.

D. M.

Rosenthal, *Paris Medical*, April 17, 1920, suggests a **novelty in the performance of a small tracheotomy** early in certain laryngeal conditions, such as neoplasms and tuberculosis. The rationale for the procedure is the opportunity it gives for easy local treatment and the rest it gives to the diseased part. The location selected is the crico-thyroid space; the instrument is the curved tracheotomy needle, which is followed by the small tracheotomy tube.

D. M.

REPORT OF SOME CASES OF MEMBRANOUS FORMATIONS ON THE TONSILS.

J. W. STITZEL, M. D.,

Hollidaysburg, Pa.

ON the evening of March 2nd, 1918, Mrs. T. called at my office with the following history:

She had been unable to breathe through her nose for the last three nights; in fact, could not lie down on account of the sense of suffocation, and consequently had been unable to get very little sleep during this time.

On looking into the nostrils I found the entire mucous membrane of the nasal cavity filled with a dense grey membrane. Further questioning elicited the fact that about five days previous to her visit to my office she had had a severe sore throat with all its attendant constitutional symptoms, as chilliness, severe aching pains through the body, marked rise of temperature, etc.—symptoms which, as you know, usually accompany any infectious process in the throat, more particularly infection through the tonsils.

I immediately took a probe on which was wrapped a pledget of cotton, such as we ordinarily use to make applications to the nose and throat, and applied it to the membrane; it turned up very easily, but bled rather freely from the point of removal. Bleeding was largely a profuse oozing from the mucous membrane at the point of removal, and stopped readily upon application of adrenalin. After turning up the membrane I gradually removed it in pieces, as much as an inch long and varying in width, until I had the left side entirely clear. I then proceeded to remove the membrane from the right side, and after rolling or turning up the membrane about an inch back of the nasal orifice I grasped it with a pair of nasal forceps and by using gentle traction I succeeded in removing it en masse, and had a complete cast of the nasal mucous membrane slightly larger than my index finger. To be exact, it was three and one-half inches long and one and one-half inches in circumference; membrane was at least the thickness of ordinary skin. The part next to the nasal mucous membrane was

slightly roughened but the inner surface was smooth and shiny. The color of the membrane was, I would say, a bluish grey, entirely different in color from the diphtheritic membrane I have seen several hundred times, and of course it did not separate by a process of necrosis as the diphtheritic membrane always does when left alone. Membrane extended from the nose back into the pharynx.

I immediately called up her attending physician; he came in a few minutes and I showed him the membrane I had removed, whereupon he gave me the further history of membrane upon both tonsils at the outset of the disease. The membrane had evidently spread upward and involved the whole nasopharynx as well as the nasal cavity. I saw the patient the next evening and again removed about one-fourth the amount removed at the first visit. Two days later I saw her again and found a few little patches of membrane, which I found upon subsequent visits did not reform.

About a week later the attending physician called at my office and took me to see the patient's daughter, aged eleven years, who had been sick in bed for two days and had both tonsils covered with the same kind of membrane. This latter case had no subsequent involvement of the nose or naso-pharynx. In other words, the membrane was limited to the tonsils. A few days later another member of the family, a little girl of four years, had a like attack with involvement of the tonsils alone.

On April 23rd I was called to see Master P., aged five years, whose father told me had been sick for about thirty-six hours. Had been taken sick in a neighboring town and consulted a physician, who said the little fellow had la grippe, but as he failed to get any better I was called and found he had a high fever, was chilly and aching, with a sore throat. Upon inspecting the throat I found both tonsils covered with membrane. Next day he was better and temperature much reduced, but during the night the temperature again went up and membrane spread to the nasal cavity. During the next day his temperature gradually subsided; the following day his temperature was normal and the membrane was completely gone from the tonsils but still could readily be seen in the nose. He continued to have a thin, somewhat irritating discharge from the nose with some crust formations for about two weeks longer. This doubtless was due to

the membrane in the nose, which, on account of the age of the patient, I was unable to remove as I had done in the first patient. By way of explanation I want to say that both families were close friends and in consequence their children were frequently together. The mother of the last patient told me they had kept away from the other family on account of the trouble they had been having, but about a week previous to the boy's illness he had been playing with the little girls.

I have been able to find but very little literature bearing directly on this subject. Only a few authors of text-books on the nose and throat even speak of membranous formations on the tonsils outside of diphtheria. The few who do, treat the subject very briefly. I am sorry that I did not have a bacteriological examination made. I fully intended to do so, and saved some of the membrane, but it got destroyed by mistake. The condition was evidently at least infectious, as all members of first family contracted the disease except the father. Membrane was not the white membrane I have seen several times in scarlatina, neither was it the color of the membrane I have seen several hundred times in cases of diphtheria. Besides it separated easily, and certainly in the first and last cases if Klebs-Loeffler bacillus had been present there would have been marked constitutional symptoms upon nasal involvement, at least, instead of a subsidence of the constitutional symptoms immediately following the development of the membrane in the nasal cavity, as in the last case mentioned.

None of the cases was followed by any of the numerous sequelæ so often found following diphtheria. I am thoroughly satisfied from the experience I have had with several cases of so-called Vincent's angina that the condition was not one where Vincent's spirilla were present. The color of the membrane was entirely different, was easily removed and showed little tendency to recur after removal. In fact, after the second removal only small patches recurred and the membrane was much thicker. As I said before, it was as thick as ordinary skin, and in certain areas even twice that thickness. Infection was doubtless due to the presence of streptococci, the bacteria giving rise to false membrane of highly coagulable albumenoid material.

STAMMERING: STOP, LOOK, LISTEN.

ERNEST TOMPKINS, M. E.,

Pasadena, Calif.

IN the JOURNAL for March and April are two editorials, "The Need for Critics" and "Highbrows and Lowbrows," which are commendable for their general application and especially commendable for their application to the recent development in the field of stammering.

Read "Highbrows and Lowbrows" and then note the parallel in the following occurrence at a speech clinic. The highbrow portion comes first. "To give an idea of what it means to get a complete history of the case, only the other day a young man, an American, twenty-one years old, came to the clinic for treatment. It took almost three hours to get his history, for he could not say a word unless he accompanied the word with some bodily movement. When sitting in a chair it was impossible for him to say a word without bobbing up and down, each word accompanied by a bob, like a jack-in-the-box. In order to facilitate matters it was thought that perhaps better progress would be made if the patient would stand and answer the questions. This did not help much because as soon as he stood he pranced round and round the room, giving an excellent imitation of one under the influence of liquor. When the case was finally finished both he and the person who took the history were exhausted. The clinic is fortunate in having three voluntary history-takers whose aid in this special feature of the work is invaluable."

Consider this three-hour torture of the poor stammerer in connection with Dr. Kenyon's fine generalization that "The stammering finds its inciting cause in the social emotion present and the social emotion is also much augmented by the embarrassment resulting from the peripheral phenomena," from which it follows that this clinic established to relieve stammering was inculcating it to a terrible extent. That unfortunate stammerer will never forget that humiliating experience; and when it comes to his mind he will be induced to stammer and will probably accede to the inducement.

Now take the lowbrow side of it: The stammerer could have been asked to write the answers to the questions; no peripheral phe-

nomena would have resulted; no augmentation of the social emotion would have occurred; no one would have been exhausted; and American medicine would not have been disgraced.

"The need for critics" and for practitioners eager for criticism is too evident to require emphasis. Like flowers, the truth needs constant cultivation, and, like weeds, the error needs constant uprooting; so develop the criticism—especially the constructive criticism. But we can do something else, more efficient and more agreeable than criticism; we can warn our associates against mistakes which will injure the public and tarnish the reputations of those who make them. Automobile associations put out danger signals for the protection of their members; why should medical associations fail to follow the wise example? Without waiting for an answer, let us set out a few danger signals for those who may possibly go wrong in regard to stammering; and, not to set up a straw man to knock down, let us take the examples from a new and authoritative discussion of the subject.

"The whole mental fabric of the stutterer is askew." To show the danger of this mistake we need turn back only five years to a serious jolt received by the medical speech-specialists. It is quite the custom to mis-characterize the stammerer—to pronounce him immoral, anemic, catarrhal, mentally deficient, and so on; and generally none but the long-suffering stammerer suffers from that custom. Dr. Makuen, whose reputation was then very high, made the remark that the stammerer's central and peripheral mechanism are both out of gear and his mental attitude toward speech altogether wrong; and under ordinary conditions that serious mistake would have passed without question. But it happened that Capt. W. N. Hughes, U. S. A., ably showed that it was a mistake, and it also happened that the *Literary Digest* repeated the substance of that able showing. Now the advertising capability of the *Literary Digest* amounts to six tons of paper per page; and it is difficult to imagine the chagrin of an authority who finds that one of his serious mistakes is advertised to that extent, and at the hands of a layman talking only from personal experience. Learn a lesson from the sad experience of others, and be very careful how you characterize the stammerer. A good rule for guidance is to ask yourself, "Could I by this characteristic distinguish whether he is a stammerer or not?" If the imagined characteristic is not sufficiently characteristic to stand that test, you are safer in not using it.

"Stuttering is the result of a functional disease of the nervous system, which"—and so on. Let us amplify the scope of this mistake, in order to make the discussion more comprehensive. Let us say "Stammering is a disease or the result of any disease:" that will include ninety-nine per cent. of the declarations on the subject. Shall we accept that statement? Call up the disease-theory advocates. Call the author of the amnesia theory. Can he sustain his theory? No.¹ Call the author of the asthenia theory. Can he sustain his theory? No.² Call any one of them; can he sustain his theory? No. Now there are two rules for the guidance of those who pretend to scientific procedure. One rule is not to accept what is not demonstrated and the other is to accept what is demonstrated. These rules, of course, apply here. The disease views have ever remained undemonstrated and the habit view—the speech interference theory—stands fully demonstrated. Of course it is hard to give up a cherished view, but which is better to give up, an erroneous view or a reputation for reliability? Choose, for you must give up one or the other. But, you may say, "No one can tell; I might discover a disease theory." Stop and think. Why are you not looking for some new theory of the revolution of the earth? or the rotation of the earth? or the sphericity of the earth? Why not? Simply because your neighbors would set you down as "daffy" if you did; for it is one of the best recognized conventions of society not to seek new explanations of phenomena which are already adequately explained. Otherwise we would still be employed on solutions of the solved and we would never get to the unsolved. So, disappoint you as it may, even to seek a disease theory of stammering is to discredit yourself. Oh, there is nothing to hinder your seeking the disease theory and finding the discredit. Warnings are not compulsions. Suit yourself.

"Stuttering should never be considered a bad habit...." The total erroneousness of this brings to mind the popular song, "Oh, Oh, Oh." But of course the statement must be treated seriously. In the first place convulsive, abortive speech is stammering in the English language. If you are using German call it "stottern." But stuttering is not the name for the disorder in any language. Stammering is both a habit and a bad habit, and whoever says otherwise is misled or misleading. However, it is not a simple habit; and whoever is prone to scorn it on the score that it is not as intricate as a disease may rest

assured, for it is more intricate than most diseases which it has been alleged to be, and it affords ample opportunity for mental gymnastics *per se* and in its treatment. Right here we may anticipate a question such as, "Shall we seek the nature of the habit?" That question is prompted by a letter I have just received from an editor who is instructing me in the words of an eminent speech specialist as follows: "We are just at the beginning of knowledge"—in regard to stammering—"and what we need is to find out many things which people do not yet know and which no one has proved to the satisfaction of anyone but himself." We might say, "Speak for yourself, John," for this authority is the very one whose mistakes we are taking as warnings here, and certainly he has many things to find out. He is holding out a vain hope for others. The discovery is made. Dr. Liebmann³ probably got it in print first. The discovery is fully adequate and has been fully proved, our authority just quoted notwithstanding; so there is nothing left to do but to comprehend and apply that discovery.

"No exception should be made to the rule that the stutterer must sleep alone, and never in the room with the opposite sex. No sacrifice is too great in order that this may be carried out." Before we consider this mistake, we should explain that the italics occur in the original. Evidently the author considered this the most important statement in his discussion. Let us see how important it is. The reflection of the Freudian doctrine is evident. An eminent university president takes me to task in personal correspondence for lack of respect for that doctrine. Lest I hurt the feelings of other believers in it, I wish to explain that I am considering it only in connection with stammering, with which it has no connection; and if there is anything in the theory, its advocates are only discrediting it when they assert it to be a basis of stammering. The evil of the injection of sex into the disorder may be seen by any thoughtful person who does a little sane thinking. Not long ago I had a letter from a young lady who, after narrating her suffering from stammering, heroically declared her determination not to marry in order not to pass the affliction on to others; and frequently I have been asked by men stammerers if I thought they had the right to marry, fearful that the prospective children might suffer as they do. All this apprehension, and the deprivation which results from it, are the result of the popular mistake that

stammering is inherited. What are the facts? They are that no proof of inheritance has ever been shown, and that we have overwhelming evidence that the disorder can not be inherited.⁴ Here again are two clear determinants of our belief and our action. We must not believe in the undemonstrated and we must believe the demonstrated. So, when a lonesome stammerer—and the lonesomeness of the stammerer is extreme—when one comes to you and asks if marriage is right for him or her; if you have due regard for the truth and humanity you will say, "Go and get married and bless you; only desist from your stammering, especially in the presence of the children: they will not inherit it, but they are very likely to acquire it by imitation or association, if they hear it." The whole subject may be dismissed with the statement that no normal human function is injurious to the stammerer. Those who state otherwise are of that class which still has many things to learn.

"Ballard gives the statistics from a very elaborate survey made by him on the school-children of London, and his findings eliminate any question as to the effect of the change of the preferential side of speech." The erroneousness of this is shadowed in its very statement. What is the preferential side of speech? The advocates of this dextro-sinistrality causation theory of stammering are so quick in jumping at conclusions that they jump in our very sight. The theory has not been sustained to any material extent by subsequent observers.⁵ and as a matter of reason it is contrary to universal experience. For instance, it rests on the allegation that interference with the use of the preferential hand causes mental disturbance. Let the reader grasp that allegation. Read it carefully. Now, keeping it in mind, exercise a little common sense and see it dissolve into nonsense. Education of the non-preferential hand is not interference with the preferential hand, is it? It is merely neutrality. And not strict neutrality at that, for those who have two hands use both in much of their manual labor. So the "interference" passes out. In short, the fundamental hypothesis is mythical; and the superstructure must necessarily be the same. But suppose the fundamental hypothesis was valid; suppose we did interfere with the preferential hand. Supposition is unnecessary: we do interfere with it. The baby bites it, the thorns scratch it, the fire burns it. Is our brain injured thereby? Not at all. So, not only is the

basis of the allegation mythical, but the statement itself is nonsense. If you are wise, avoid it."

"The question comes up of the likelihood of other children acquiring the stuttering from him. While this has apparently happened occasionally, the number of cases is so small as to make the chances almost negligible." What regard for his reputation has the author of that statement? With unlimited evidence of the contagiousness of the disorder, with careful observers such as Fletcher attributing half of it to association and imitation, this authority calmly, and without evidence, sweeps all experience aside in order to sustain his disease theory. We need not confine this paragraph to this particular misstatement. Do not deny incontrovertible facts. Do not deny the spontaneous recoveries; do not deny the voluntariness of the spasm; do not deny the accidental origins. These and many other facts are very stubborn, and in a contest between them and your contradiction, the latter is sure to be worsted.

Probably no warning could be better to terminate with than this one: do not write anything in regard to stammering until you have thoroughly read the recent writings of Dr. Albert Leibmann.

If you follow all this advice, you will have, instead of the unpleasant expectation of captious criticism, the pleasant realization of commendatory criticism, and no danger of a six-ton jolt.

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THE PHILOSOPHY OF HOMŒOPATHY.*

WESTON D. BAYLEY, M. D.,

Philadelphia, Pa.

THIS subject was so wrought upon at a time when the materials comprising it were, so to speak, at white heat, that there now seems little to add to the older labors, especially since its malleable stage seems to have passed. There are present among my auditors those who can recall a time when these county society meetings were very different from what they are now. In my youthful period the meetings were relatively well attended; the then older practitioners who lived all day with the materia medica and took it to bed with them o' nights were most always here on the job. The study of symptoms and the differentiation of drugs was with them the one serious business of life; and these veterans came here fresh from their cases, bringing with them the aura of their daily therapeutic experiences. It was then common for Bœnninghausen to be carried in the bag to the bedside. In the county society meetings therapeutic discussions were earnest, lengthy, and at times even acrimonious, and woe unto him who had given a patient bryonia 6 when on public analysis it should have been sulphur 200!

It is some measure of this living faith that your worthy and splendid president is so earnestly trying to revive in these present meetings; and it was only in recognition of and sympathy for the toughness of his job that I responded to this call, accepted his title for this discourse, and consented to piece together some random reflections dealing with the specific subject of our school of medicine, locally considered. Dr. Carmichael has thus handed me a bottle, so to speak, with his own label on it, but I was left to fill it with whatever remedy and in whatever dosage I chose. Therefore, if the subject matter does not exactly fit the title it is, to change the simile, because the broth was the product of two cooks, each with his own special ideas of what "yarbs" and spices were to enter into its composition.

*Read before the Philadelphia County Medical Society.

It was not necessary to listen to the comic opera proceedings at the last meeting of the Germantown Medical Society for one to realize that there is something locally amiss with our school of medicine. I was present in the proscenium at that meeting, but immediately refused to be dragged in a most absurd costume onto the stage. After some discourse concerning the orthodoxy of the teachers at Hahnemann Medical College, it is a sober truth that a motion was actually made and carried that a committee of three be appointed, unconnected in any way with the faculty of the College or staff of the Hospital, to invade those sacred premises, ruthlessly investigate, and then point out the culprits who did not preach and practice real homœopathy in our much cherished institution. Great heavens; only think of it! What a fascinating job! If this idea in its conception was anything short of lunacy, what adequate term may apply to the process of its accomplishment? Such an investigation, with the stupendous humor of its performance, would certainly resemble the deplorable incarceration of Private Smith. The officer of the day with a salute reported to the colonel:

"Sir, Private Smith's drunk again."

"Wazzat? Send Private Smith to me."

Presently Private Smith ambled up to headquarters. Said the colonel: "Private Smith, you're drunk again."

"Yesh, Colonel, I'm drunk again."

"Well, Private Smith, I'll give you one day to get sober in."

Private Smith saluted. "Right, Colonel; in'smuch as you're a good deal drunker'n I am, I'll give you two days to get sober in."

For some years I have officially belonged to the societies of both schools of medicine, and upon due reflection I frankly remark that I can see nothing untenable in this personal state of medical being. In fact, were there a real live eclectic medical society in this county I would certainly join that, too, for it is a constitutional peculiarity with some of us that we can always learn many things of many people.

I hope you will pardon the frequent recurrence of the personal pronoun in this reflective discourse; it is distasteful, but does seem necessary for the constructive context.

We all know that there is something wrong with local homœopathy, and in recent years I have given some thought to the subject. Tonight I am going unreservedly to express the results of these per-

sonal cogitations, handing them out merely for what they are worth, and with no special regard for personal consequences. Dr. Carmichael has heartlessly dragged me out of the silence, and should there be any come-back he will, *nolens volens*, have to divide with me the responsibility.

Homœopathy as a seriously vital department of therapeutics in the Hahnemann Medical College of Philadelphia flourished fairly well under the remoter domination of Hering, Guernsey, Raue, Farrington, and others, down to the advent of a man who possessed the most charming personality I have ever known in a medical teacher; a man whom I to this day sincerely admire as a physician and personal friend. This eminent and delightful practitioner in the earlier years of his practice was a strict Hahnemannian homœopath. In one article from his pen, written years ago, he reported a series of several hundred cases of typhoid fever treated under exact homœopathic prescribing, with a remarkably low mortality. There can be no doubt but that he was a good observer then, because we all knew him to have been a good observer in later years. He was a man with a very broad mental outlook, absolutely honest, an indefatigable student, and in his labors he turned to the old school literature and clinical teaching in order to keep thoroughly abreast of the times in all things medical. By his versatile labors he brought into our school of practice all of the exact science of disease derived from allopathic sources; but then appeared the human limitations of even a genius. By these necessary excursions there developed a gradual transition in thought and method, and ultimately he departed from his older established therapeutic faith, became an empiricist, and finally came to teach and practice in his inimitable manner a therapeutic hodgepodge, which changed from year to year, and was neither homœopathic, allopathic nor eclectic. It was a method distinctly personal, absolutely empirical, and based upon a search for simpler specific medication for classified disease.

This conglomerate therapeutics he taught with all of the forcefulness of personal modesty, since he really relied on other departments—the chair of materia medica and therapeutics, particularly—to furnish the students with orthodox homœopathic methods, which he personally had well-nigh abandoned. Had half of his medical genius resided in the occupant of the latter chair all might have been

well; but students in their plastic stage are hyper-impressional and they easily take sides—especially do they gravitate from a more laborious and difficult method to a simpler cut and dried one.

What were the normal consequences of all this? In successive years class after class of students passed through college with the idea that the homœopathic materia medica was something indeed to be taken of necessity, like an attack of measles, but that in actual practice it could be serenely ignored for the far easier therapeutic short-cuts which conveniently outlined a few remedies for given diseases. Why indeed lug around in the already overburdened medical mind the yard-and-a-half or so of Hering and Allen, when something like Gatchell could be conveniently tucked away into one's mental vest pocket? Why carry a trunk on our shoulders if a convenient hand bag will suffice? Whether all this was an improvement on former conditions or not I will leave for posterity to decide; but it remains a fact that with the years of successively graduating classes the older homœopathy of Hahnemann and of Hering gradually gathered the dust of the remoter shelves, while a semi-eclectic, semi-homœopathic empiricism became the established mode of thinking and prescribing.

After the retirement of Dr. William C. Goodno from the chair of practice the same therapeutic atmosphere remained, but lacking all of his constructive genius. Since that time the sincere efforts of Haines, Howard, Carnichael, Yeager, Paxon, and others have not sufficed to restore the impersonal method of Hahnemannian prescribing. Even could these gentlemen duplicate the experience of the Biblical Samuel in the presence of the Witch of Endor, and evoke the reproachful shade of Samuel Hahnemann, I doubt if it would bring back to Hahnemann Medical College, the pristine genius of all that it originally stood for as a distinctive school. No, Hahnemannian homœopathy lies locally dead, encoffined and buried without even the majestic trio of Chopin's funeral march to give it a passing and mournful mortuary recognition.

Hic jacet Hahnemannii!

What was true of a strong mentality like that of Dr. Goodno is similarly true all along the line of the practitioners of the various specialties. These gentlemen in our school of medicine have derived their training from, and owe due recognition for their status to established allopathic sources. Unfortunately they, too, in many in-

stances and in varying degree, have dumped out the homœopathic baby with the bath, and forgetting our historic reasons for being a separate school of medicine bring back only the established flora of allopathic ideas to decorate the homœopathic corpse so that it will 'look more natural and life-like

Some time ago the son of one of my colleagues, fearing his father's wrath, came to me with a beautiful dose of gonorrhœa. I sent him to one of our specialists, who treated the patient for some weeks without material benefit. I shifted him to another expert in this line with like results. Business took the patient to a western city, and not knowing any local doctor he took a chance on one who had a sign, homœopathist, in his window.

This old doctor laboriously recorded all of the patient's symptoms, got down some books, studied, and finally handed to the by that time skeptical and disconcerted youth six powders to be taken three hours apart. Then the significant thing happened. In a few days the discharge stopped and that and his other related discomforts have never recurred. A coincidence, of course, but why is it that these seeming cures are never coincidences when they occur under some more favorite method of treatment?

Not long ago one of our colleagues broke down nervously from overwork, and developed a very peculiar insomnia. He consulted one of the foremost teachers at Hahnemann and was told to take some bromide by day and powders of sulphonal at night. As time passed there was no apparent benefit from this treatment, so becoming discouraged he went to another doctor not connected with the institution, who noted the special characteristics of his case. His insomnia, I have remarked, was peculiar. He would go to bed, fall asleep, and then waken in a state of fear and depression. He would then arouse his wife and talk incessantly to her until sleep would again overtake him, with a later repetition of the same modality. Aggravation after sleep—great loquacity,—Lachesis 12 was the remedy given by the second prescriber, and the patient was practically well in a week.

I have heard well-trained specialists in our school apologetically admit that they knew little of the materia medica, and further remark that in their particular work there was seldom need for the symptomatic prescribing of potentized remedies. This is not here set forth as a criticism of their methods, for I may not be at all competent to pass

judgment on their particular work. But some of these men are teachers in our College, and all of them remain officially connected with the homœopathic school of medicine. Nor has it been long since that one of the clinical teachers connected with Hahnemann College declared in a meeting of this Society that homœopathic remedies were certainly worthless in cases of chronic failing heart; and when someone objected to such a sweeping asseveration, this teacher of our students appealed to his training in foreign hospitals as a sort of badge of authority, and with withering scorn intimated that the objector was by comparison incompetent to pass judgment, much less hold a different opinion from his on a subject of this kind.

Quite recently a homœopathic physician who held a minor position in one of the large camp hospitals during the recent tragedy of influenza, remarked in my presence that several old school colleagues who were his senior officers requested him that if they were stricken down with the disease would he treat them with the homœopathic remedies which they had seen him use in some of the cases under his care. Had these gentlemen been logically consistent they would have taken the trouble to learn the better methods and apply them in practice for the benefit of the other poor devils. While we are on this subject I want to remark that there never has been a worse debacle of allopathic bungling, failure and helplessness in the whole history of medicine than was shown in the recent dreadful epidemic of influenza. If I had treated large bodies of men with the therapeutic trash and truck which was dealt out by old school doctors during those nightmare days, I solemnly declare that I would never again pass a cemetery at night unless accompanied by an adequate bodyguard of mounted police!

We are all aware that the homœopathic remedy frequently fails, even when chosen by masters of the art, like my friend the late Walter M. James. On the other hand, it is a sincere personal conviction that there are many cases, and often bad cases, when nothing but the homœopathic remedy will suffice to bring about the desired results. There are various reasons for failure. The proving may have been faulty or defective, or the drug prescribed may differ in some quality from the drug used in the original proving; or it may not have been prescribed in the right potency, or the case may be one wherein ho-

homœopathic medication is inappropriate, and mechanical, chemical, physiological, or even antipathic measures are more closely indicated.

We have often heard it said that the older homœopathic doctors were lacking in knowledge of the clinical history of disease; that they were poor diagnosticians; that their therapeutic enthusiasm beclouded their faculties of observation. Since they were nearly all old school men who subsequently embraced homœopathy such a criticism would perforce have to apply equally to the entire profession of the period, irrespective of school, and its only validity is in the comparison of their less modern opportunities with the standards of today. But let us not forget that there are now homœopathic practitioners here and in other places (many of them, to whom this implication of ignorance cannot be justly applied) who still assert that it is well worth while to work with our *materia medica* and our repertories in the same old fashioned way of our predecessors, as by this method we are still able to get the best results in clinical practice.

It must be remembered that homœopathy is not now, and never was, the whole show in therapeutics. One of the most ardent teachers in former times, Carroll Dunham, clearly indicated this in his writings years ago. The practical physician needs the help of mechanical things, surgical things, chemical antidotes, physiologically and antipathetically acting things, and a few things which are empirical "specifics;" any of these procedures may claim the centre of the stage under appropriate conditions; but with all this there is no justification for a physician of our school to damn his own therapeutic system by faint praise, or to neglect it altogether for a lazy, haphazard empiricism, and perhaps at the same time exhibit a supercilious pity and compassion for those men, in or out of the college faculty, who laboriously and conscientiously try to follow the system of practice formulated by the greatest laborer, genius and reformer in applied therapeutics the world has ever known.

Internal administration of acids and alkalies does not seem to influence the reaction of saliva, and there is no apparent relation between variations in the reaction and any particular disease. Bloomfield and Huck, *Bull. Johns Hopkins Hospital*, April, 1920.—D. M.

ABSTRACT.

Two Cases of Gradenigo's Syndrome are reported by J. L. Maybaum (*Laryngoscope*, March, 1920; Vol. XXX, pp. 138-142). The condition was first reported by Gradenigo in 1904. It is characterized by an acute purulent otitis media, with or without mastoid involvement; intense pain in the temporal and parietal regions from involvement of the Gasserian ganglion, and paralysis or paresis of the abducens nerve of the same side as the aural lesion. Dr. Maybaum then cites two cases, one of which died. In this case there was a history of acute middle ear suppuration which had completely resolved at the time of the first visit of the patient. The syndrome had been subsiding gradually for a period of ten days. On admission to the clinic August 28, 1919, the examination, except for the paralysis of the right external muscle, was negative. Right tympanic membrane is normal in appearance; no discharge or perforation. Tenderness over mastoid not present; no spontaneous nystagmus.

Hearing tests: Noise apparatus in left ear, patient hears whisper in right ear at fifteen feet, left ear, twenty feet. C' fork lateralized to right ear. Rinné negative right ear. Temperature and pulse normal. (Any whisper that could be heard fifteen to twenty feet with noise apparatus in the opposite ear is certainly "some whisper." The technique of recording the Rinné test would appear to be at fault in that there is no statement made as to the time that it was negative compared with the normal Rinné for the particular fork used.)

The Wassermann was negative. Radiograph showed a slight shadow over the right mastoid; no bone destruction. Patient died in thirty hours following onset of meningeal symptoms.

A résumé of the literature on Gradenigo's Syndrome to date would seem to show that abducens paralysis, *per se*, is not an indication for operation; but that the degree of intensity of pain together with evidence of insufficient drainage are more certain indications.

WILLIAM G. SHEMELEY, JR.

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Editorial

THE 1920 MEETING OF THE O., O. AND L. SOCIETY.

THE opinion was universally expressed by all those who were fortunate enough to have been able to attend the last meeting of the Society that from the standpoint of attendance, quality of the program, enthusiasm and all else that goes to make a successful meeting this last went far ahead of any of our previous meetings. The greatest measure of credit is due to the last administration under the presidency of Dr. McLean and the wisdom he exercised in the selection of his bureau chairmen, Drs. Hetrick, Moon, McCleary, and Denman.

Those present regretted the absence of those who were unable to get to the meeting, for what they missed. A meeting such as this last will be hard to beat, but let us do it. Let us get an early start.

ED.

OFFICERS-ELECT, 1920-21.

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HOW TO BECOME AN O., O. AND L. SPECIALIST.

THIS is a question that has been put to the editor so often by the aspirant that he feels it might be well to answer it in the editorial pages of the JOURNAL in order to reach a material number of inquirers at the one time. The subject of post-graduate teaching in the specialties has interested the editor for a long time, in fact, before the world war began, but more so since. Without question Vienna was the ideal center for post-graduate instruction in all the specialties. Furthermore, it was not the most expensive way to obtain the end desired.

Since Vienna, for the present at least, is an impossibility, there is no reason why we Americans ought not to get together and do something to improve our opportunities. That the O., O. and L. Society appreciates the need and opportunity is evidenced by the Society's action at its last meeting in appointing a committee to consider the problem, about which more will be unfolded from time to time.

The opportunity for study in this country is not being afforded the aspirant to the extent that it should be. Up to a year or so ago there was but one school in America that made any attempt to give a systematic graded course in our specialties. The Graduate School of Medicine of the University of Pennsylvania started to do so last year, and the prospects are bright for the coming year. However, the demand is greater than the supply; that is to say, there is more than double the number of applicants than the school is able to take care of. They are compelled, therefore, to select from the total list of applicants only those who are the most promising from the standpoint of credentials and other requirements.

There are two other ways of obtaining the object of becoming a fit specialist which the average aspirant rarely thinks of, and to which the editor wishes to call attention. One is to enter a post-graduate school as a resident physician. A very well-equipped surgeon that he knows is a man who got his training in just this way. He served as a resident physician to several hospitals, one after the other, for several years. He finally struck out for himself and made a "cracker-jack" surgeon, acquiring a large and profitable practice in the great metropolis of this country.

For a young man who desires to make good in a similar manner

the same opportunity is offered in the Post-Graduate School in Philadelphia, the New York Ophthalmic, and no doubt elsewhere. After finishing a term at one such institution he can readily move on to the next.

Eventually someone with an exuberance of practice will recognize his worth and make an offer to take him into partnership—which is the other plan referred to. Then his success is assured.

G. W. M.

AN OPEN LETTER FROM A MEMBER OF THE O. O. AND L. SOCIETY.

Waterloo, Iowa,

August 2, 1920.

DEAR DOCTOR MACKENZIE:

I just want to remind you that those of us who were permitted to go out to Dr. Phillips' clinic were given a rare treat. Dr. Phillips had gathered in a goodly number of patients, showing quite a variety of operations, including, as I recall, three submucous, several cataracts, advancement operations, demonstration of the McLean tonometer, etc., besides tonsils and adenoids. His work was done in a thorough and careful manner, and all of us who were out wish to publicly express our appreciation.

Fraternally,

FRED C. SAGE.

PRESIDENT'S ADDRESS.*

WILLIAM McLEAN, M. D., O. ET A. CHIR.,
New York, N. Y.

FELLOW MEMBERS OF THE AMERICAN HOMŒOPATHIC OPHTHALMOLOGICAL, OTOLOGICAL AND LARYNGOLOGICAL SOCIETY: We are gathered together again at this season of the year to meet, not in conclave, but in open session, and consider for a time a program which represents scientific endeavor on the part of our members, and in a social way greet our acquaintances, and again to shake hands in many warm friendships, friendships which have been made, fostered and cemented by our annual meetings. A great many of these friendships of ours would never have been made had it not been for the close association and high esteem which our members have for this, our national, and I think I am correct when I say, the only national homœopathic society of eye, ear, nose and throat specialists in the world.

You have honored me with the Presidency this year, an honor the highest which it is possible for our Society to bestow, and to you, fellow members, I feel most humble and appreciative of the honor you have given me.

It is customary for the President at this time to make some suggestions to be considered by this body. Before going into that part of my address to you, I would like to tell you a little of my trip to Oxford last year, as some of the suggestions I have to offer are closely linked with information which I gleaned in talking with men at the Oxford Ophthalmological Congress.

On my arrival in England I went first to London, where I was entertained by Lieutenant Colonel and Mrs. R. H. Elliot, who made me feel most welcome. Colonel Elliot and I went from London to Oxford together, and during my whole stay in England he left nothing undone to insure me a pleasant visit.

Oxford is a quaint old English town of learning. Its buildings are typical of old England; nevertheless it is very refreshing, and a trip

*Delivered at the annual meeting of the O., O. and L. Soc., Cleveland, O., June, 1920.

PRESIDENT'S ADDRESS.

around Oxford is a delight. The Oxford Ophthalmological Congress is a body which meets annually in Oxford, usually in the summer. Last year the sessions of the Congress were held at Keble College. Keble College is one of the newest of the Oxford group, and was opened in 1870. The College was closed for the summer vacation, which offered the opportunity for the doctors assembled at the Congress, to live at the dormitories of the College. The custom is a pleasant one and I thoroughly enjoyed it. Upon registering with the College authorities I was assigned to a little suite of rooms in the dormitory.

The Congress was attended by men from the various parts of the British Empire. I had the pleasure of meeting many of the prominent English oculists, men widely known and ranking high in ophthalmology. The Master of the Congress was Sydney Stephenson, a most charming personality. You have all doubtless read much of his writings. Besides my friend Colonel Elliot, of trephine fame, I met Colonel J. Herbert Parsons, with whose work on the Pathology of the Eye you are all familiar; A. F. MacCallan, of Cairo, Egypt, who has given us some important writings on trachoma; also T. Harrison Butler, Thomson Henderson, P. E. H. Adams, Bernard Cridland, Walter Keep, and many others from England, Scotland, Ireland, Canada, Egypt, India, and Australia.

The invited guests on the program included Dr. Van Lint, of Brussels; Dr. P. Bailliart, of Paris, and myself. Among the many interesting papers presented was that by Dr. Bailliart, who, by invitation, read a paper on the Bailliart dynamometer for determining the blood-pressure in the branches of the central artery of the retina, and also demonstrated his dynamometer. I have been in communication with Dr. Bailliart and am sorry he is not with us at this session to demonstrate his interesting work. I hope to be able to induce him to read a paper at one of our future meetings. Dr. A. F. MacCallan gave a very interesting talk on "Seasonal Variations of Acute Conjunctivitis in Egypt." My own paper was most enthusiastically received and I was asked to demonstrate my tonometer.

It is customary at the Oxford Congress to select some distinguished oculist to present what is known as the Doyme Memorial Lecture. For the 1919 Congress this honor fell to Colonel J. Herbert Parsons, who delivered a very interesting talk on "Preventive Oph-

thalmology." At the close of his address he was presented with the Doyne Memorial Medal. The Doyne Memorial Lecture this year will be delivered by F. Richardson Cross, the subject being "The Nerve Paths and Centers concerned with Vision."

Some of the members of the Congress made it known to me that my invitation to England was but the beginning of an effort on their part to foster closer relations between our two countries, and that for this year they were trying to get Dr. Luther C. Peter, of Philadelphia, to come before them. I understand that it has been arranged that he is to go to Oxford and open the discussion on "Perimetric Methods."

The social life of the Oxford meeting centered about the dining-room of the College, which was thrown open for the benefit of the members of the Congress. The men gathered together at meal-time around the big, long tables and enjoyed being served in the same manner accorded the undergraduate students. The whole air of the social side of the Congress was one of delightful recreation, and gave us all the feeling of being boys again. A banquet was held one evening which included the ladies and several invited guests among the laity. One feeling, to me quite overwhelming, was the attitude of the English oculists toward the American people. Many with whom I talked did not hesitate to express their feeling that whatever our differences in the past have been, we are in reality brothers, and as brothers we should appear in the future before the world. One man tried to explain the gulf between us in the past as due to the fact that we did not understand them, neither did they understand us. They would like to become better acquainted with us so that they may make our interests their interests. The English all feel that the war which is a thing of the past is not the end of war. Other strifes will inevitably occur, and in the future the English-speaking peoples should be found standing shoulder to shoulder. They did everything in their power to show by their courtesy and kindness to me that they will be willing to go more than half-way in an effort to produce a better understanding. At the banquet they even drank a toast to "Our American Brothers Across the Sea."

One of the things I would like to suggest to this Society is that in order to foster this brotherly feeling, whenever possible we invite the English oculists to bring before this Society any matters which would be of mutual interest to us. I might add that it would be well

PRESIDENT'S ADDRESS.

for us to encourage the same feeling with the French oculists. Some of the French oculists have written me concerning my tonometer, and our correspondence has brought to my notice some very interesting work of the French men. I can assure you, if the papers which I had the pleasure of hearing at the Oxford Congress are a sample of the work of England and France, the effort will be worth our while.

One of the things which impressed me most was the strong feeling that the German-speaking nations must never again be allowed to entrench themselves so strongly in the post-graduate teaching of the world. The English men talked with me on this subject, and I learned that the English institutions are preparing to take up the post-graduate teaching of medical subjects in such a way that, if necessary, the post-graduate teaching of the world could be carried on in the British Isles. A representative of the Medical Corps of the A. E. F. in France who had been investigating post-graduate work in the special branches, came over to the Congress. From him I learned that France felt that she should take her stand and do her share in future post-graduate work. He had made quite a survey of French post-graduate work in the eye, and told me that should I go to France, I would find the French oculists quite alert and "on the job."

There has been an Association formed in this country,* known as the New York Association for Medical Education, whose purpose is to supervise the allopathic post-graduate teaching in New York City.

I strongly recommend that this Society appoint a committee whose duty it shall be to supervise the post-graduate teaching of the eye, ear, nose and throat in the homœopathic school throughout the United States.

One of the functions of this allopathic association is to keep itself informed of and pass on the qualifications of teachers and the character of the course they offer to graduate students of medicine. Also to observe and regulate the manner in which engagements are met by those offering courses under the auspices of the association. I would like to quote from the bulletin issued by this association the following: "It is a recognized fact that there has never been adequate provision in this country for the training of any considerable number of medical specialists; that until the present time when one desired to specialize in any branch of medicine or surgery, or, even wished to pursue special studies under the guidance of

competent professional instructors, he was practically compelled to visit the great medical centers of Europe, notably London, Paris, Berlin, and Vienna. The historic events of the past five years closed the German schools to American students and it is devoutly to be hoped, for many good reasons not based at all upon the bitterness engendered by war, that American students will never again find it necessary to seek their graduate education chiefly in German universities. This lays bare the most important need for immediate action on the part of our medical institutions. Graduate instruction must be made available for thousands of American students annually to meet the needs of the United States alone, to say nothing of Canada and the countries of Central and South America."

There is a sentiment expressed very strongly among the organizers of these new courses in the allopathic institutions that the day has passed for the giving of the so-called six weeks' courses for specialists. Our New York Ophthalmic College is the pioneer in exacting a full course of instruction, and has never lent itself to these so-called six weeks' courses. The Manhattan Eye and Ear Hospital has this year abandoned all its short courses and established an eight months' course of post-graduate study in the eye, ear, nose and throat. This plan has proved very successful, as the demand for such opportunities was demonstrated by the fact that they could accommodate less than one-half of their applicants. Forty-two students took that course this past winter.

In view of these new courses now being advocated, the New York Ophthalmic course is sadly in need of reorganization. As we have been the pioneers in this class of work we should keep in the fore. We must, if we are to exist, have a course which is second to none, and if possible excels any similar course given in this country. The course as outlined in the syllabus of the New York Ophthalmic is excellent in so far as it goes, but more laboratory work is needed and more time spent on the fundamentals. In point of time the present course is long enough, but the students complain that while they are busy all the afternoon, the mornings are practically waste time for them. I would recommend that these morning hours be filled in with work, and that the course be so rearranged as to give the students more time in the clinics and that they be definitely assigned among the staff for clinical instruction. The present course is from one until five

with very few breaks. This gives the students very little time for clinical work, as all the lectures are crowded into the afternoon.

In a course such as we should recommened the collaboration of an undergraduate teaching institution should be sought. I should think as an example, in Boston, in the Boston University we would find adequate provision, so that with little rearrangement suitable laboratory instruction could be given to the graduate student in the special branches, while the clinical instruction could be taken care of by the specialists. In New York City none of the sepecial hospitals are equipped to carry out this laboratory teaching, and on the other hand, none of the undergraduate institutions could give the necessary clinical instruction. In the Ophthalmic we have an abundance of clinical material, but lack the facilities for laboratory work. A practical solution would seem to lie in a collaboration of the New York Ophthalmic and the New York Homœopathic Colleges. An association of this kind ought to be comparatively simple and should prove mutually advantageous.

The New York Ophthalmic has demanded a full course of instruction in eye, ear, nose and throat work in order to obtain the degree of Surgeon of the Eye and Ear, and that is right. The inter-relation of the eye with the nasal sinuses, and the inter-relation of the ear with the nose and throat should be sufficient reason to compel the eye student to complete a full course of eye, ear, nose and throat instruction before the degree is granted.

The fees for such a course as I have advocated here must necessarily be far in excess of the present rate at the Ophthalmic. In fact, the fee charged in the past for the course given at the Ophthalmic has been ridiculously low.

My plea is that this Society see to it that the courses of instruction already being given by our school, be so improved that we retain as in the past, the leadership in post-graduate teaching in the eye, ear, nose and throat in this country, and that if possible one or more other courses vying with this proposed course be established.

I would recommend that a committee be appointed large enough to supervise this difficult and important subject, and that this committee be placed on the list of standing committees of this Society.

We must not lose sight of the fact that in the changed condition of the world, post-graduate instruction must be provided for thousands of American students annually. We have now another problem to face

in the matter of supplying post-graduate instruction to men from the South American countries, who are already knocking at our doors. We must make provision to care for large numbers of these students and offer them nothing but the best.

The homœopathic school has given the best course in this country in the past. Why can't we keep in the advance? There is a wealth of clinical material in New York City and there is probably ample material in the cities of Philadelphia, Boston, and Chicago. Possibly it will not be for the New York Ophthalmic to keep in the fore, but why cannot this Society institute proceedings so that the most advanced teaching in the special branches shall remain, as in the past, in the hands of the homœopathic specialists? We have the men, why not have the institutions?

We have arrived at the parting of the ways. The time has come when we as a homœopathic school of specialists must advance with the new order of things and keep our post-graduate teaching the best as in the past, or give over to the specialist of the other school in this country the entire teaching of specialists in the eye, ear, nose and throat.

WANTED.—An assistant House Physician at the New York Ophthalmic Hospital. Salary, \$20.00 per month and living. Apply to

CHAS. C. BOYLE, M. D.,

40 E. 41st St.,

Executive Surgeon

SOME FACTORS IN THE PRODUCTION OF ENLARGED TONSILS.*

J. A. FERREE, M. D.,

Ohio State University, Columbus, O.

THE LAW OF ACTION AND REACTION. One never looks at, macroscopically or microscopically, or feels tonsils, in the main alike but peculiarly different, without there being plastered all over them, why, why, why should here be a bump, there a restriction, why here it be soft, there indurated; in fact, the great eternal question, why at all? Notwithstanding all this mental perturbation it was seen fit to create the tonsil, and since its creation man has evaluated it. In short, it has become a very fixed, definite thing; and in some there may be still other questions, aside from simply its recognition, and, closely following this, its *attempted* eternal banishment, to consider. Such questions must necessarily be fundamental, must deal with the question why? hence the following:

Let us waive the question of the general character of lymphoid tissue except to say that it is *widely* distributed, that it has reticular connective tissue packed with lymphocytes, that these lymphocytes cannot be distinguished from those of the blood and hence obey the physical laws governing lymphocytes wherever found.

Now to the consideration of lymphoid tissue as found in the tonsil. A cross-section of this shows the following (stained with eosin and methylene blue): Near the epithelium and at more or less regular intervals are round or oval areas which are differentiated from the surrounding tissue. These oval or round areas have a pale rose center with a blue periphery, and that portion of the circle nearest the *epithelial* surface is more closely packed or thickened, looking something like a seal ring. These are known as lymphoid follicles. Upon closer analysis it is found that two kinds of tissue are shown, the usual reticular connective tissue and lymphocytes. The arrangement of the reticulum varies, depending upon its location, whether in the follicle or in

*Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

the diffuse tissue. Of greater importance is the consideration of the lymphocytes. The cells of the center are of two types: the larger and more numerous, with faintly stained nuclei and indefinite cell outline; the nuclei, which often show mitotic figures, are designated as lymphoblasts or mother cells. Between these and the lymphocytes, which become the predominating cell as the periphery is reached, many intermediate cells are found. The second type of cell in the center, the endothelial cell of the reticulum, has an acidophyllic protoplasm and a large, pale, vesicular nucleus. Both of these types, however, are found outside the follicle in the diffuse tissue but are very much inferior in number as compared with the predominating lymphocytes. Then the plasma cell is found immediately below the cryptic epithelium, in the vicinity of the fibrous framework of the node and around the blood-vessels.

In mucous membranes the lymphoid tissue is developed in the fibrous layer (*tunica propria*) whether diffuse or circumscribed.

Whenever lymphoid nodules are developed in mucous membranes, the mucosa infolds or invaginates in the form of pits or crypts. This crypt is the unit and may be single or may fuse with others, forming a larger node. The essential point is, that this solid epithelial sprout grows out into the surrounding fibrous tissue of the mucosa either as single or as branched sprouts. After a convenient period of time the center of these sprouts degenerates, forming loose, horny plugs which are finally expelled into the faucial cavity. Now around these epithelial sprouts collect the lymphoid cells in the fibrous layer of the mucosa in their own peculiar manner, dissecting their way between the individual fibers, until finally is found the type of arrangement that has been indicated. This packing in of the cells so compresses these sprouts that they become mere slits.

A leukocyte may be looked upon as a drop of colloidal solution surrounded by a delicate surface layer which is more or less readily permeable to solvents and to substances in solution and suspended in a fluid of quite different composition. Such a drop of fluid, suspended in a different fluid, obeys well known laws of physics. The particles of each fluid are all under the influence of a very considerable force called the cohesion-pressure, which tends to draw them together closely. Within the drop each particle is subjected to this force from all sides alike, so that the forces neutralize each other; each particle is as free

as if there were no cohesion-pressure. But the particles on the surface are subjected to unequal pressure, for that of the fluid outside the drop is different from that inside, so the pressure on the surface particles is equal to the difference between the cohesion-pressure of the two fluids; this constitutes the surface tension. It is this tension that pulls in upon the surface continually, causing it to tend always to reduce the free surface to a minimum, which condition exists perfectly in the sphere. The amount of cohesion affinity is very different in different fluids; some, therefore, have a high surface tension and some a low. When one substance dissolves in another, the surface tension is a resultant of the surface tension of the two substances; hence the surface tension of a liquid may be raised or lowered by dissolving various substances in it. Imagine a drop of fluid suspended in water—a drop of protoplasm, mercury, or oil; the drop owes its tendency to assume a spherical shape to the surface tension, which is pulling the free surface toward the center and acting with the same force on all sides. The result is that the drop is surrounded by what amounts to an elastic, well-stretched membrane, similar to the condition of a thin rubber bag distended with fluid. If at any point in the surface the tension is lessened, while elsewhere it remains the same, of necessity the wall will bulge at that point, the contents will flow into the new space so offered and the rest of the wall will contract; the drop moves toward the point of lowered surface tension. Conversely, if the tension is increased in one place, the wall at that point will contract with greater force than elsewhere, driving the contents toward the less resistant part of the surface; the drop will move away from the point of increased tension.

The strong resemblance of these changes of form and the type of motion produced, to amoeboid movement, is apparent. Much experimentation has been carried on to determine how far the processes of motion as shown by amoebæ and leukocytes can be produced by fluid drops under various conditions, and to ascertain whether such amoeboid movements of living cells can be entirely explained by the laws of surface tension. The results of these experiments all but indicate that these cells react to various stimuli through the effect of the latter upon surface tension. These stimuli may act from within as a result of metabolic changes in composition, such chemical changes altering the tension of the surface nearest their point of origin and

causing what seems to be spontaneous motion. Stimuli, such as chemical, thermal, electrical or mechanical, may act from without, causing movement through their effect on surface tension.

To translate the term "stimuli" into "irritation" is still within the pale of reason and is more in harmony with the phenomenon known as hypertrophy. So let us read into this word "irritation," within its reasonable degree of meaning, and we have a factor in surface tension which transfers us from the physiological to the pathological. For instance, the factors that incite cells to proliferate, as well as those that cause the cessation of proliferation after it has started, while still a matter for speculation, are probably identical with the stimuli which excite or increase functional or nutritive activity. Observation has shown that in this same cell-proliferation and phagocytosis, the bacterial products which, when concentrated, destroy the cells, when sufficiently diluted cause a proliferation of these identical cells.

Now it is not necessary nor even advisable at this time to enter into detailed recital of the factors which influence this drama, such as blood content (acquired or inherited), local abnormalities, perverted venous circulation and the extraneous influences to which all are exposed. Each plays its role, the prominence shifting in each individual case. We are not unmindful of other factors in cellular proliferation, such as osmosis and its playmates, intracellular and extracellular imbalance, but we do insist that, grossly, the law of action and reaction, or irritation and surface tension, must not be ignored in this phenomenon.

Thus the behavior of the lymphocyte, its motion, et cetera, is under the influence, in part at least, of the force under discussion. If this be true, is there any location in the body so favorable for the staging of this drama as the faucial tonsils? Is it unreasonable to presume that, even in other localities, where lymphoid tissue is found, this is not a factor?

DISCUSSION.

E. D. BROOKS: Kalamazoo, Mich.: In his able and scientific paper Dr. Ferree has shown that tissue such as that of which the tonsils are composed may, under suitable conditions, undergo hypertrophy in response to external irritation in much the same manner as do cancer cells. In following out his suggestion we are led to inquire as to what

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those conditions are which in conjunction with such irritation accomplish results in one person to which many others are immune. In our search we discover many concomitant symptoms and must be on our guard or we will confuse correlative symptoms with causes.

Along with other conditions coincident with enlarged tonsils we find mouth-breathing, which is irritating to the whole oro-pharynx and may be one of the causes of progressive hypertrophy of the tonsils, which in turn may be caused by adenoid growths in the naso-pharynx, which, in turn, are caused by some other defect of the nasal air-passages or a condition of the general system which is evidenced by a tendency to glandular hypertrophy and a state of lowered resistance to outside influences. Here you have a vicious circle in active operation.

Who of us has not seen the whole complex of symptoms disappear under the influence of the indicated remedy?

Operative measures only remove the effects, not the cause, which fact brings us to the truth that as it is a chronic condition with which we have to deal we must resort to the indicated remedy in order to perform a cure, and homœopathy furnishes the safest, mildest, surest means to that end.

We can but rejoice that Dr. Ferree's paper only mentioned "some factors" and did not profess to cover the field of causes, but rather gave us the philosophy and the *modus operandi* of such causes as are mentioned and whose method of operation deserves explication and clarification. As contributing to that end the paper deserves high commendation.

GEORGE W. MACKENZIE, Philadelphia, Pa.: Mr. President: I can't discuss this paper because I haven't had a chance to look it over. I can merely endorse what Dr. Ferree has said in the absence of proof to the contrary. The subject of surface-tension I am not familiar with. We do know that constant irritation has a stimulating effect. Generally speaking we have two types of inflammation, the destructive type and the productive type. Repeated irritation induces mild inflammation which can only result in cell-proliferation and hyperplasia. Where we have excess nutrition cells multiply before they reach maturity and therefore are of lower order. It is an overgrowth of such cells that result in hyperplastic tissue. The same condition is to be met with in the tonsil as elsewhere in the body where repeated attacks of mild inflammation occur.

While listening to Dr. Ferree's paper, the subject of leptothrix infection and its treatment came to my mind, and with your permission I wish to speak of some experiences I have had in the treatment of such cases. We have been trying for years to find something that will clear up these cases effectively and permanently. I tried all sorts of applications and internal medicines recommended in the literature, but with feeble results. Eventually I tried fulguration, with excellent results; a form of treatment that can be borne by the patient without any particular discomfort. I recommend it for what I believe it to be worth to those who have not yet tried it.

A MEMBER: How long a gap do you make?

DR. MACKENZIE: I usually try a gap of about two or three millimeters. Sometimes I fail because of clumsiness on my part, or movements of the patient. There are very few cases in which there is a single infection. Manipulation of instruments is not always easy, but one with ordinary patience can get away with it.

G. B. RICE, Boston, Mass.: How do you distinguish between the forms described?

DR. MACKENZIE: They are horny protrusions standing out considerably from the surface, and are hard when you attempt to take hold of them with forceps. The color is white, or dirty white. They occur in all parts of the throat, including the tonsils. However, they start in the tonsil.

GEORGE B. RICE, Boston, Mass.: I have had some experience with both keratosis and mycosis of the throat. I have many times seen the horny tufts appear on the tonsils, the faucial pillars, the posterior wall of the pharynx, and the base of the tongue.

I have had excellent results with the galvano-cautery. This cautery must be applied to each tuft. The applications are somewhat painful and many sittings must be given, but in my cases a cure has always resulted.

BURTON HASELTINE, Chicago, Ill.: I would like to ask Dr. Mackenzie if it is his custom to remove the tonsils in each case?

DR. MACKENZIE: My experience is that I never remove the tonsils until after I have cleaned up the spots. I think in nearly all cases of faucial tonsils it is necessary to have the tonsils removed sooner or later, invariably later.

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I would like to ask Dr. Ferree to give us a clinical application in any case.

DR. FERREE (closing): I suppose I am more or less of a fool to work along the lines that do not seem to bring in dollars and cents, but what started me on this thing originally was the kind of education that there seemed to be among the lay people as to the tonsils and all allied questions.

This is not a clinic paper, as usually understood. Neither am I much interested in the mechanical end (surgery). My fear is that we, the medical profession, are degenerating into mechanics and are losing sight of the more important factors.

Replying to Dr. Mackenzie, my feeling is that much more should be done by more competent men than is the case now. This deserves attention.

A Clamp Tonsillectome.—Evan Hyslin, M. D., *Laryngoscope*, February, 1920, describes a new instrument for enucleating tonsils, according to the method of Sluder Beck. The advantage of the clamp over the usual instruments of the Sluder design is that it permits the removal of both tonsils in rapid succession with complete hemostasis during and after operation.

The fenestrum and crusher are automatically released from the instrument when the tonsil is severed and remain as a "clamp on the stump of each tonsil. The short shanks of the clamp that project from the corner of the mouth offer no obstruction either to the operator or anesthetist.

"If adenoids are to be removed it is best to do so after the clamps are removed."

W. G. SHEMELEY, JR.

TWO UNUSUAL EAR CASES PRESENTING SYMPTOMS OF INFECTION OF THE LATERAL SINUS.

JOSEPH V. F. CLAY, M. D.,

Philadelphia, Pa.

THE clinical manifestations of otitic lateral sinus infection do not usually correspond to the symptomatology as expressed in the average work upon this subject. Indeed, it might almost be said that the symptomatology of these cases is very variable. Again, cases that seemingly present classical pictures of septic sinus infection fail to disclose at operation well-marked and unmistakable evidence of sinus involvement. Undoubtedly cases presenting symptoms of sinus thrombosis are true cases of septic infection with a focus in the sinus, perhaps mural, and too small at times for macroscopic detection.

CASE I.—Male, age 37 years, a muscular, sthenic individual, was attacked by an acute respiratory catarrh, on the fourth day of which he developed pain in the left ear. Examination at this time revealed temperature 104° F., pulse 112, respirations 28. The left ear presented dusky-red canal walls, a bulging injected membrana tympani, on the surface of which were hemorrhagic vesicles. There was no mastoid tenderness. Under nitrous oxide anæsthesia, incision of the drum liberated a quantity of thick, yellow, muco-purulent secretion, which cultured the long-chain streptococcus.

During the next three days the temperature continued up and down, ranging between 101° F. and 104° F. A well-defined rotary nystagmus to the left was observed, and the patient was dizzy upon the slightest motion of the head. Functional testing showed the hearing to be markedly impaired; Weber's test was referred to the left ear; bone-conduction was normal. The discharge from the ear at this time was thin straw-color and less profuse. The nystagmus and dizziness disappeared in twenty-four hours; the temperature continued septic, with chills, sweating, and a tendency to delirium. There was no change in the local ear-manifestations, and no mastoid tenderness. The discharge was sero-sanguinolent and not profuse. The canal walls were less in-

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jected. In short, the otoscopic findings were those of a subsiding otitis media.

It was very evident that we were dealing with a virulent systemic infection, and the question was,—is the ear the primary active focus or is the condition simply a local manifestation of a systemic infection?

Examination of the spinal fluid revealed nothing suggestive—certainly excluding a general meningeal condition. A blood-culture developed a luxuriant growth of the same long-chain streptococcus as developed from the discharge from the ear.

On the eighth day the right knee-joint became very tender and slightly swollen. The septic character of the temperature with repeated chills and sweating, and the presence of a positive blood-culture in the face of a suppurative middle ear, were extremely suggestive of an involvement of the lateral sinus. Examination of the patient's general condition by Dr. H. F. Ewing was negative. We accordingly determined it expedient to open the mastoid and ligate the internal jugular vein.

Upon opening the mastoid, softened bone was found on the floor of the antrum. The tip cells appeared normal. The lateral sinus wall presented no macroscopic changes. The internal jugular vein was ligated and the lateral sinus opened. Free bleeding was, much to our disappointment, present. The operation had little influence upon the general condition of the patient except that the temperature excursions were less wide.

Four days after the operation the left knee and thigh became tender and swollen, the right knee having cleared up. Blood-culture taken at this time was sterile. Three days later the right knee-joint again became very tender and swollen, with marked chills and sweating. It was evident that a septic arthritis was present. The joint was drained by Dr. G. A. Van Lennep. From the joint the long-chain streptococcus was cultured. In spite of the most painstaking attention on the part of Dr. Van Lennep the knee-joint gave considerable trouble, requiring several incisions. The patient subsequently developed a large abscess on the extensor surface of the right arm. This was drained.

As might be expected in so thoroughly septic a patient, the ligation wound suppurated. The mastoid wound was left wide open, and healed in eight weeks; the jugular wound in three weeks. The knee-joint continued to discharge pus for several months, resulting, of

course, in a stiff joint. It is not to be forgotten that the right knee-joint was inflamed before we operated the mastoid, but this apparently subsided and the left knee-joint became involved, and then he had considerable pain in the sacro-iliac region. Following the ligation of the jugular and mastoid, the process localized in the right knee-joint.

Another clinical observation in this case. Before ligating the jugular we had a bacteræmia. Four days after ligating the jugular the blood-culture was sterile, but the septic symptoms were present. If the joint-involvement was the primary focus and responsible for the bacteræmia before the ligation of the jugular, it would seem that we would have found bacteria in the blood four days later, following the ligation of the jugular. The septic temperature continued for twelve weeks after the ligation of the jugular. Repeated culture of pus from knee showed the long-chain streptococcus.

Another very remarkable feature of the case is the fact that in this very severe systemic streptococcic infection the endocardium and myocardium remained free of infection.

The second case is also interesting because of the absence of definite findings at the operation.

CASE 2.—Male, age 32 years, gave a history of having had severe malarial infection some years ago while in the Panama Canal Zone. Tubercular glands of the neck were removed a few years ago. He claimed that his health had been poor for three months, and in February of this year he developed a fullness in the right ear, followed by severe pain, which was markedly aggravated by lying on the affected ear or when touching the auricle. Dr. Fullmer Hoffman, who saw the case at this time, describes a swollen canal, a boil, which he opened, liberating pus. The pain and soreness continued for several weeks, when he developed pain in front of the right ear, with redness and swelling and great weight in the head. The temperature was 103° F., pulse 128, respirations 20. The canal walls were swollen so that inspection of the drum was impossible. The mastoid was very tender, as was also the neck in the region of the sterno-mastoid muscle. At operation a very dense cortex was encountered. There was no free pus but the tegmen antri was necrotic. The tip was devoid of cells; the inner plate over the lateral sinus was quite soft. The sinus wall on inspection presented no change.

For forty-eight hours the temperature remained normal; then the

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patient had a chill with temperature rising to 102° F. The white cell count was 9,600. Differential—polynuclears, 78 per cent., lymphocytes, 21 per cent.; basophiles, 1 per cent. The temperature continued septic with daily chill for three days. After the chill the patient felt perfectly comfortable. His condition did not impress one as that of a very sick man. Wassermann reaction was negative. Examination of the blood on two occasions for malarial parasites was negative. The blood count now showed a leucocytosis of 18,800. Blood culture was also negative.

On the 11th day after the mastoid operation he felt "something give way" in his head, as he expressed it, and discovered blood from under the dressings. The house surgeon was called immediately, and from his description of happenings the bleeding was undoubtedly from the lateral sinus. Our suspicions in this direction were sustained by our findings a few hours later when we ligated the jugular. Dr. G. Morris Golden examined the patient at this time, and found nothing from the internist's standpoint to explain the symptoms. We thereupon decided that the internal jugular should be ligated, on the assumption that we were dealing with a septic state, the original focus being a lateral sinus thrombosis the result of an infection through the mastoid.

Upon attempting to remove the packing from the mastoid, free bleeding occurred from the lateral sinus. The internal jugular on the right side was ligated. During the next twenty-four hours the patient presented symptoms of respiratory difficulty—when Dr. Golden found evidences of septic pneumonia. This together with cardiac failure carried the patient off in forty-eight hours. Unfortunately autopsy was not permitted.

The interesting clinical feature of this case is the apparent origin of the trouble in the external ear, with subsequent middle ear and mastoid extension.

PHYSIOLOGICAL CONSIDERATIONS IN REFRACTION.*

I. D. METZGER, M. D., O. ET A. CHIR.

Pittsburgh, Pa.

PERHAPS the greatest marvel of all the wonders of creation is the human eye. The transmutation of energy in nature from one form to another with the mysterious laws under which it supervenes amazes the scientist; its quest is filled with bewilderment and joy. But the chemical and physical laws operating throughout creation, are yet more mystifying when combined in animated bodies with physiological possibilities. The complex resultant becomes the sensation and admiration of all creation.

In the eye we have these three laws acting so mysteriously as to challenge the most astute observer to their segregation. In the use of cycloplegics we try to simplify our complex problem by eliminating the apparent functional activities of involuntary origin. By making the organ static we hope to elicit the irregularities in its physical properties which place intolerable stress upon the physiological activities and result in the systematic reaction known as asthenopia, or in the visual defects classified in the various forms of amblyopia.

In our eagerness to ascertain the refractive errors minutely and correct them exactly, we are apt to forget the value of the physiological phenomena of the human eye and the importance of maintaining their integrity. The compensatory efforts of the human body generally are marvelously effective, and especially so in the eye. What may appear mechanically to incapacitate the organ totally may under desperate innervation prove to be but a slight hindrance to useful vision. Such constant innervation soon produces hypertrophy of the plastic tissue with a permanently changed physiological mechanism. To inactivate such unnaturally developed tissue is apt to invite incompetency and atrophy of the same. The law of loss from lack of use is especially applicable to these conditions. The writer desires to pro-

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test against overhelping ocular functions as well as against indifference in rendering the needed aid in securing easy and competent vision.

NEEDS OF THE TIMES.—Education consists largely in the development of the senses and of the reflexes. Learning to see clearly, accurately and quickly means years of critical apprenticeship; and, since nature seems to have ordained that distant vision should be the natural vision, modern educational methods and intricate social conditions make this training a veritable ordeal. Even a slight ametropia may make visual perception so difficult as to cause mental desperation and ocular pathology.

Every social worker can testify to the prevalence of dullards, truants and juvenile criminals in modern school life. Every ophthalmologist can affirm the prevalence of ocular defects in such cases. Nor is this stress confined to school life. Constant innervation of both the intrinsic and extrinsic muscles is a task which is unnatural and which few eyes will tolerate at any age. Imagine the agony entailed in holding one's arm in a horizontal position for an indefinite period of time, or in flexing and extending the forearm without relief for hours, and one can in a way comprehend the distress incidental to continuous accommodation in convergence or to incessant change of focus. The requirements of clerical or of literary life and the alertness necessary for safety in our bewildering daily activities are apt to accrue into a state of ocular and consequent physical fatigue which is beyond one's power of endurance.

However, since society is thus organized an adaptation to the status quo means a physical and functional adjustment of the eyes so as to meet the demands with the least possible ill effect, and with the greatest possible flexibility and ease in performing their duties. The consideration of several concrete familiar conditions of functional irregularities may be of greater interest.

AMBLYOPIA EXANOPSIA.—This curiously-named condition like all avoidable troubles is deplorable and incredulously prevalent. The army examinations discovered many who never had had any intimation of depreciated vision in either or both eyes. In most cases one eye lacks in its development, since all the efforts are centered into the other eye, the one with the less amount of refractive error, so that its fellow remains unused, hence underdeveloped. The senses at birth, we should remember, are just as infantile as the other parts of the

body but early awaken to their peculiar stimuli. The eye especially seems to be well set in its future status early in school life. In fact, by the time that routine school inspection elicits the defect, the period of development has well passed. Can we not somehow impress upon the general practitioner and the laity the paramount duty they owe to the youngsters in having made a systematic sense-examination not later than three years of age? These patients, although less conscious of it, suffer the same handicaps from lack of binocular vision as one who inadvertently loses the sight of a useful eye by accident.

The muscle imbalance so frequently found in these patients, whether due to misplaced muscles or to hypertrophy from undue efforts at accommodation, should be corrected before an abnormally placed visual area is developed. It is plausible to assume that satisfactory mental perceptions can spring only from analagous retinal pictures which are symmetrically placed. Moreover, the eye becomes early established in its basis of function, and to attempt to disorganize this after its compensations have been made is apt to be more disconcerting than to leave it in its primary abnormal position. Early investigation of the cause producing the muscle imbalance and immediate efforts to remove this cause, either by operation, by refraction or by exercises, will lead to the most efficient vision.

OVERCORRECTING HYPEROPIA.—In the desire to ease the accommodative efforts, the tendency among ophthalmologists is to push the rule of maximum correction in hyperopia beyond warranted bounds. A status of ciliary hypertrophy has hitherto been established which in functional efficiency is quite different from that indicated by the curvature of the refracting media. In excessive hyperopia accommodative compensation has established a new standard of normality, not only in securing a clear retinal image in each eye, but also in fusing the two images. In a complete mechanical refraction the relation between accommodation and convergence is altered so that mental incoherence, by not being able to comprehend the distorted pictures, is inevitable. I wonder if this is not a greater cause of discomfort than the lack of ciliary relaxation under the excessive correction.

Much of our safety and efficiency rests in the fact that we can easily, quickly and keenly fix our vision upon objects of varying distances. Our alertness and mental acumen are largely the result of this training, and to alter or hinder such functional activity is unwittingly

placing an unwarranted barrier to our comfort and success. Can we censure the patient for praising the optometrist who takes our cue, relaxes our correction somewhat, and thus gives comfort?

Again, the overcorrection of hyperopia tends to disturb equilibrium and orientation. Fixation of vision serves as a guide-stick to equilibrium. To change the accustomed distance of the eye from the ground causes a noticeable feeling of discomfort, in some cases even of bewilderment. Our unconscious desire is to keep this distance constant, hence the inclination to jump from elevated positions as over a precipice. When the refraction alters the normal relation between accommodation and convergence the guide-stick has been changed, and we can not easily adjust ourselves to the new condition. Likewise, the efforts at convergence are apt to be so hampered by the overcorrection of the hyperopia as to change the whole educational career of the young student. Close work which formerly caused him slight inconvenience now may be an unbearable task. The rebellion against our insistence upon their attempt to become accustomed to the new glasses may be justifiable in this kind of cases. By complying with our requests, and suffering, the compensation may eventually be broken down so that an actual incompetency in convergence may supervene. Although a marked esophoria for distance existed in some cases in the experience of the writer, a marked exophoria for accommodation had developed under the overcorrection. It then became necessary not only to reduce the correction but also to revivify the internal recti muscles by exercises before the patient could do any close work with comfort. In view of these possibilities it seems to me one is rarely justified in making any prescription on the cycloplegic basis alone. With this as an indispensable guide the judgment must take cognizance of the functional demands which are requisite for free and positive fusional activity. The relative heterophoria for the far and near points should remain unchanged; both should be reduced as much as possible but their relations should remain constant.

MUSCULAR DEVELOPMENT.—Granting that variations occur in the points of attachment of the extraocular muscles in different eyes so as to produce an imbalance, the writer still feels that much more might be done by way of muscle development. Too many cases are drifting into presbyopia and ocular misery with incompetent internal recti muscles and with uncertain fusion power. These can both

be quite effectively developed in earlier life and should not be neglected until the symptoms appear and the days of grace have passed.

MONOCULAR VISION AND FUSION.—Binocular vision, secured without conscious effort or fatigue, is essential to safety, to comfort, to mental development and to successful economic competition. The change in focusing from near to far and vice versa requires an appreciative length of time, so that with vision in a single eye one should not attempt to perform many of the common duties of life which require rapid accommodation for one's own and others' safety. With both eyes acting properly, we unconsciously switch from one to the other, which we can do quickly, having one eye set more or less constantly for near and the other for far. This change is accomplished much more easily and accurately where the muscle balance is good and the fusion is keen.

TINTED LENSES.—Permit me briefly to protest against constant use of colored or tinted lenses. The use of these passed through the fad period some time ago, but some yet remain. Under undue illumination the sensitive retina may undoubtedly suffer and may become permanently damaged from continued exposure. Common sense teaches us that it then needs protection. But under ordinary light, daylight or sensible artificial illumination, the eye should be required to functionate unhindered and unaided by any light controlling device. As the wing is suited to the air and the fin to the water, so eyes are ordinarily adapted to natural light. To make this unnatural over a course of considerable time is bound to alter the physiological activity of the visual purple. This, in turn, may depreciate the ultimate powers of perception. Even the much-feared actinic rays, lying beyond the violet in the spectrum, may be essential in maintaining the integrity of the retina. A constant photophobia, even though slight, calls for a critical investigation for some abnormality either in the media, the refraction, or the retinal fusion.

EARLY PRESBYOPIA.—I desire also to protest against the use of two varying corrections for near and far to be used before the presbyopic age. The waning lenticular elasticity may not begin absolutely at the age of forty-five, but the variation from this time is slight and unusual. When bifocal lenses are prescribed at the age of forty, or earlier, or even below the age of forty-four, a definite explanation of the reason therefore should be forthcoming. Any inability to do

near work before the average presbyopic age should call into question the accuracy of the distant correction. Likewise, any correction for distance should be worn constantly and not for near work alone, especially in preadult life. To relax the extra efforts at accommodation required by the distant lens in using a stronger near lens reduces the normal functional activity of the eye, invites atrophy of the ciliary muscle by under nutrition and reduces the facility of quick and accurate accommodation. Furthermore, correction with lenses sets a new relation between accommodation and convergence, so that by varying this with different lenses, or by fluctuating from no glasses to glasses, will cause an ocular status which is inconsistent and under which the patient will be comfortable neither with nor without the glasses. Moreover, to invite early presbyopia, as such change is bound to do, is neither more desirable in one's patient than it would be in one's self. The fatigue brought about by attempting to overcome errors in focusing parallel rays of light may be so great at the time of refraction as to appear to make the distant correction inadequate for close work. Later, when the eyes are rested through the use of the distant glasses, there may be ample functional capacity for doing near work with the same lenses.

In general, it seems to me, we are just approaching the threshold of physiological investigation of the eye. If we knew better the functional capacity in the natural state and in the state of compensation, if we could comprehend more fully the variation in vision of different eyes under similar conditions, and if we could better apprehend the *modus operandi* of the mental perception of the visual images, we might thereby find a surer foundation upon which to base our reasoning and our judgments in our efforts at giving aid by refraction. At all events, we must never forget that vision is the main gateway to mentality, and we must make the ingress to mental percepts so easy and in such a manner that they may reach the mind for elaboration in a clear, true and an assimilable form. He who does this best serves his generation more truly than in any other phase of ophthalmological work.

May 18, 1920.

DISCUSSION.

G. A. SHEPARD, New York, N. Y.: It has been a pleasure to hear a paper which shows that the writer has a true appreciation of the

duties of the oculist in his refractive work. The person who has an ocular defect, whether refractive or muscular, has established certain ideals as to form and fusion, and the habit of expending the requisite amount of effort needed to attain those ideals. We should not forget the old saying: "What I have written I have written and shall continue to write." It is a mistake to think that a technically perfect test of refraction or muscular imbalance can safely be allowed to dictate our prescription without first considering all of the factors which enter into normal binocular single vision:

- (1) A clear image in each eye with accommodation at rest.
- (2) Equal size of images.
- (3) Adjustment of these images over one another without undue effort of accommodation or convergence.
- (4) The clothing of these fused images with a psychic garment which we call perspective.

The accomplishment of this visual act, in the absence of physical perfection, requires a drain on the nervous reserve which differs according to the temperament and environment of the individual.

A correction of presbyopia which would be reasonable in esophoria might be unreasonable in exophoria. To give a person who has a high degree of muscular imbalance better perspective power may cause trouble unless the imbalance is corrected. To correct an imbalance without raising the fusion and perspective sense is usually only of cosmetic value. The physiological nerve-currents which have been diverted to take care of long-lasting abnormalities can only be gradually brought back to normal.

It seems to me that the writer has taken too strong a stand in advising no presbyopic correction until the age of 45, as by that time many people have established improper relations between accommodation and convergence and the use of the presbyopic glass, which must sometimes be worn, is bound to cause more friction.

RALPH I. LLOYD, Brooklyn, N. Y.: Dr. Shepard brought out a number of things that appealed to me and are of interest. There might be one other point worth mentioning in connection with this matter; that is to say, a general proposition, when your patient does not see 20/20 it is time to look around for the cause and correct it.

As Dr. Metzger has pointed out, there is likely, however, to be an over-correction.

FRED. C. SAGE, Waterloo, Iowa: I just want to call attention to something that all of you have observed—that is, a person going into a new place, a new town, gets the impression that he has seen that place before; there is a vague sort of feeling that he has been there before, when he knows he could not have seen it. Still, the impression remains. I read the explanation for this phenomenon in a book gotten out by the Smithsonian Institution. It went on to explain that in some people the perception of an image occurs a fractional part of a second sooner in one eye than in the other; the image becomes clear sooner in one eye than in the other.

Rather an unusual phenomenon, but very interesting.

I. D. METZGER: I want especially to express my appreciation of Dr. Shepard's discussion. There is certainly something more than the mere fitting of glasses that is necessary. His description of the old furniture, and the restfulness to be had in that room was very interesting.

The purpose of this paper was not to be technical, but simply to call attention to some of the common things that cause so many mistakes to be made. I appreciate very much all the discussion.

Biologic Studies of Diphtheria Bacillus.—The author states that two groups of the diphtheria bacillus have been determined by the use of the agglutination test. The groups are distinct evidence of cross agglutination. The two groups show no difference in morphology or virulence. The antitoxins are not so sharply differentiated as are the agglutinins. The author suggests that the inclusion in the therapeutic diphtheritic antitoxin of a number of the smaller group would enhance the effectiveness of the antitoxin.—L. C. Haven, *Jour. of Infec Dis.*, May, 1920; Abstr., *J. A. M. A.*, June 26, 1920.

H. L. GOWENS, JR.

DISCUSSION OF DR. G. W. MACKENZIE'S PAPER,
NEUROLABYRINTHITIS SYPHILITICA FROM
A DIFFERENT ANGLE.*

WILLIAM G. SHEMELEY, JR., M. D.,

Philadelphia, Pa.

THE paper on Neurolabyrinthitis Syphilitica just read touches upon one of the most important subjects in otology. Important because, as Dr. Mackenzie has pointed out, its early recognition is the key to the institution of the proper treatment, and correct therapeutic measures mean the preservation of a patient's hearing. The amount of technical skill required is not so great but that it may be attained by all; the main element is careful attention to details.

Gentlemen, it is enough to make you pause and wonder when you see case after case of neurolabyrinthitis syphilitica diagnosed as chronic catarrhal otitis media and treated as such, sometimes for years, while the patient's deafness continues to grow worse and worse, and the inflations and massage and what not go on and on in endless round until the patient finally gives up in disgust, or has the condition correctly diagnosed only to find that it is too late to secure material benefit.

It is amazing to note the amount of unrecognized or improperly treated lues. Even though a negative Wassermann test may tell us nothing, the test is well worth being made, for should it prove positive we shall at once be paced on our guard. It has been pointed out by Beck and Willcutt, and corroborated to some degree by Mackenzie, that syphilitics are prone to develop a shortened Schwabach long before the onset of material changes in time of air-conduction. A more detailed report of the result of this investigation will be made at some future time.

Five cases will be cited illustrating the points brought out by Dr. Mackenzie, namely, that the beneficial effects of treatment in neurolabyrinthitis syphilitica varies directly as to the time intervening be-

*JOUR. O., O. AND L., July, 1920.


tween the onset of the condition and its recognition and the institution of proper treatment.

That progressive bilateral impairment of hearing, together with positive Rinné shortened bone-conduction and shortened air-conduction, even in spite of a negative Wassermann test, should cause the aurist to give the patient the benefit of the therapeutic test.

CASE I.—Mr. Robert S., age 59 years. March 23, 1920. History: patient reports for about one year has had noises in head and both ears, left ear worse than right. Ears do not discharge. Hearing is impaired slightly. Subject to colds in head, also has sore throat. Ten years ago had treatment for ears after getting water in ears while bathing.

Nose examination showed S-shaped deviation of septum high up to right, small spine along suture line on right side, anterior end of both inferior turbinates enlarged preventing view of middle turbinate. After shrinking, right middle turbinate visible; space between it and septum and between it and lateral wall.

Throat examination showed hypertrophied, partly submerged tonsils, with large amount of cheesy deposits both sides upon pressure.

Right Ear		Left Ear
8 m.	Conversation Speech	8 m.
0.5 m.	Whispered Speech	0.75 m.
0.5 m.	Akumeter	0.5 m.
	Weber	
sh. 10"	Schwabach	sh. 12"
+ 25"	Rinné	+ 18"
sh. 10"	C 1	sh. 14"
sh. 9" sh. 11"	C 4	sh. 7" sh. 8"
sh. 14"	Air	sh. 14"

Otoscopic examination: Left ear,—membrane intact, opaque; hammer handle narrow, cone of light visible, long process of anvil not visible, suggestion of posterior fold. Limited motion of membrane to Seigle. Retraction of membrana. By Politzer inflation, membrane came out over small area and remained out.

Right ear,—membrane intact, opaque; long process of hammer handle foreshortened, long process of anvil not visible. Normal motion of mebrane to Siegle. Membrane retracted. By Politzer inflation membrane came out over small area and remained out.

Wassermann test was + +.


Patient was placed on daily mercurial inunctions of 5j, rubbed in for thirty minutes following a hot bath. At the time of next visit patient reported that he felt in better health than he had for a long time. Subjective noises were much less. Last visit June 12, 1920, no noises present. Patient feels in excellent health. Schwabach shortened 5" for both sides.

CASE 2.—Mr. Erastus L. A., age 39. March 18, 1920. History: Patient has noticed for about six months hearing in both ears is slightly dull, left ear worse than right. Ears have never discharged. Has noises in head but are intermittent. Never has colds in head, occasionally has sore throat. No history of deafness in family.

Nose examination showed slight deviation of septum to right; small bilateral spur along suture line. Hypertrophy of right inferior turbinate. Both middle turbinates invisible before shrinking. After shrinking, right middle turbinate hypertrophied and in contact with septum and lateral wall.

Left middle turbinate in contact on both sides. Soft palate moves on phonation of letter E.

Throat examination showed medium sized tonsils, no deposits upon pressure.

Right Ear		Left Ear
8 m. +	Conversation Speech	8 m. +
3 m.	Whispered Speech	4 m.
6 m.	Akumeter	6 m.
	Weber	
sh. 11"	Schwabach	sh. 14"
+ 37"	Rinné	+ 35"
sh. 37"	C 1	sh. 33"
sh. 5"	C 4	sh. 6"
sh. 10"	Air	sh. 17"
	310	

DISCUSSION OF DR. G. W. MACKENZIE'S PAPER.

Otoscope examination: Right ear,—membrane is intact, rather dull, cone of light present, fair opacity but not sufficient to obscure long process of anvil. Membrane and hammer handle move freely with Siegle. By Politzer inflation membrane responds promptly.

Left ear, membrane is intact, fairly brilliant, cone of light present, short process of hammer prominent, slightly opaque but not enough to obscure long process of the anvil. By Politzer inflation both membranes responded promptly and normally.

Radiographic report was practically negative.

Wassermann test negative to all antigens.

Because of the shortened bone-conduction, positive Rinné and shortened air the patient was put on red iodid of mercury, 1/100 gr. every two hours. Nine days after this, fork tests were:

Right Ear		Left Ear
	Weber	Indif.
sh. 5"	Schwabach	sh. 12"
+ 20"	Rinné	+ 30"
sh. 12"	Air	sh. 12"

showing improvement in the bone-conduction of both sides but most marked on the right side. At present patient reports absence of subjective noises.

CASE 3.—Mr. M. A., age 34 years. November 28, 1919. History: Patient reports having buzzing sound in left ear for about two months. Hearing is not impaired. Never had trouble with ear before. No discharge. No pain. Just a continuous noise. Patient gets very dizzy and sometimes falls over. Dizzy feeling when looking for long time at any object. Breathes well through nose. Does not take cold easily. No sore throat. Noise in ears resembles escaping steam.

Examination of nose showed S-shaped deflection of nasal septum. Middle turbinate not visible before shrinking. Anterior end of right inferior turbinate enlarged. Middle turbinate left side in contact with septum and lateral wall. Dislocation of quadrilateral cartilage to left.

Throat: Secondary pharyngitis. Tonsils have been removed.

Right Ear		Left Ear
8 + m.	Conversation Speech	8 + m.
2 m.	Whispered Speech	1.5 m.
3 m.	Akumeter	1 m.
	Weber	Indif.
sh. 30"	Schwabach	sh. 9"
+ 30"	Rinné	+ 35"
sh. 32"	C 1	sh. 32"
norm.	C 4	norm.
norm.	Air	norm.

Otoscopic examination: Right ear,—membrane intact, brilliant, translucent. Long process of hammer handle visible, moves with Siegle.

Left ear,—membrane is intact, brilliant, translucent. Long process of hammer visible, moves with Siegle.

Wassermann test + + + + to all antigens.

CASE 4.—Mr. James B. W., age 34. May 17, 1919. History: In 1910 had double mastoid operation in Scranton. Hearing seems to be getting worse. Before operation never had any trouble with ears. Trouble started with an abscess in throat. Hearing in left ear seems worse than in right. Has had discharge in left ear for last two years. right ear does not discharge. Claims he had adenoids broken down and operation in nose, thinks it was submucous. Not subject to colds. Patient is unsteady in his gait, cannot walk very well at night.

Patient has macular cornea both eyes, suggestion of interstitial keratitis, also pegged teeth, middle incisor scalloped. Patella reflex normal.

Nose examination showed before shrinking, deviation of the septum to the left.


Throat, medium-sized submerged tonsils, no deposits, large overhanging adenoids both sides, overreaching septum, both tubes patulous, secondary catarrhal pharyngitis.

Right Ear		Left Ear
Indif.	Weber	Indif. & sh. 12"
sh. 20"	Schwabach	sh. 22"
+ 15" (2d + 10")	Rinné	+ 5"

Right Ear		Left Ear
rather sh.	C 1	very sh.
very short	C 4	very sh.
sh. about 60"	Air	sh. about 50"

Otoscope examination: Right ear,—membrane is intact, brilliant, slightly opaque.

Left ear,—on the upper wall of canal near membrane there are clusters of white deposits arranged across the membrane. The membrane is intact in the upper portion. Hammer handle is visible. Secretion is down below.

Turning tests,—head erect, ten turns to left, ten turns to right, no dizziness or nystagmus. Twenty turns to left  2 to 3" (?) twenty turns to right, none.

Head forward,—ten turns to left none, ten turns to right none.

Geles Test.—Steady pressure in right ear, no nystagmus. Sudden compression in right ear, horizontal nystagmus 2 mm. long, three or four excursions, then ceases. Could not determine to which side. Same findings for left ear.

Wassermann test + + + + to all antigens.

CASE 5.—Miss Hazel B., age 15 years. October 20, 1919. History: About three years ago had attack of rheumatism in limbs but mostly in the knee joints, lasting about four or five weeks. In about one month's time after this attack patient gradually grew deaf, first one ear then the other (does not remember which ear started first). Ears have never discharged. Not subject to many colds, but at times has sore throat. At times has ringing noises on both sides of head. Patient is blind in right eye. Father reports has never been very strong although has never had much sickness. Has brother who had same eye-condition but after six years' of treatment is practically cured. Patient's father states that eye-condition came on about same time ears began to go bad (three years ago). Very little medicine given for rheumatic condition. Medicine was in liquid form (formula unknown). While taking medicine patient complained of dizziness. Patient never complained of earache previous to ear trouble. First marriage for both mother and father. Have four children living, one miscarriage about fourteen years ago. Patient began to menstruate one month ago for first time.

Nose Examination.—Moderate deviation of septum high up on right, small spur along suture line on left. Middle turbinate on right not visible. No evidence of sinus disease. Palate moves freely on phonation of letter E.

Throat Examination.—Tonsils submerged, slight amount of exudate on pressure. Lower right first molar decayed.

Right Ear		Left Ear
neg.	Conversation Speech	neg.
neg.	Whispered Speech	neg.
neg.	Akumeter	neg.
	Weber	Indif.
Tests could not be made	Schwabach	Tests could not be made
Tests could not be made	Rinné	Tests could not be made
Tests could not be made	C 1	Tests could not be made
Tests could not be made	C 4	Tests could not be made
Tests could not be made	Air	Tests could not be made

Three-meter speaking-tube to right ear loud conversation voice ten per cent.

Turning tests no reaction.

Galvanic tests no reaction.

Ophthalmoscopic Examination.—Right cornea is so hazy that with ophthalmoscope it is impossible to study any details of fundus. Eye-ground normal in left eye.

O. S.—Disc elongated, axis 90 sharply defined, physiological cup poorly defined because of connective tissue which follows the vessels limited to the disc. No evidence of secondary or primary atrophy.

CASE 1 is an example of a case that came under treatment fairly early, and demonstrates the beneficial effects of vigorous antileptic treatment.

CASE 2. This patient would appear not to have responded as readily as Case 1, but here we are dealing with a negative Wassermann, hence must first use the therapeutic test. Having secured positive improvement with it, more vigorous antisyphilitic treatment has been instituted.

CASE 3.—Here the patient was suffering from an unrecognized and untreated syphilis, or how long duration was problematic because

of the vagueness of history. As near as could be ascertained the condition was of three or four years' standing. The patient was at once placed on antileptic treatment but without benefit. The patient's condition drifted backward in spite of treatment. On the sixth of January 1920, he reported that he had been unconscious the day previous. Examination showed the right pupil to be a trifle larger than the left. Pupils apparently inactive to light. Gait forward with eyes open normal. With eyes closed gait forward and backward slightly less steady than with eyes open and for normal. Romberg was questionably positive.

Right Ear

normal

Schwabach

Left Ear

sh. 4"

The patient refused to enter a hospital and drifted from observation. Indirectly it was learned that he had been taken to a hospital in his home town and the last report that was received was that he was still unconscious at the end of three days. This shows how vicious syphilis may become and how very resistant it may prove to be.

CASE 4.—This case secured temporary improvement but patient was very hard to control and as a result the treatment was not carried out faithfully. At time of last visit, February, 1920, the patient's condition was no better or no worse than at the time of first visit, except for general improvement in health.

CASE 5.—This case was without question one of hereditary syphilis. Unfortunately the condition had not been recognized in spite of the brother's eye-history. The most energetic and faithful antileptic treatment did not cause any improvement in hearing, but it did increase vision from O. D. 6/200 to O. D. 5/7.5. Vision in left eye was 6/6

REVIEW.

SWANZY'S HANDBOOK OF THE DISEASES OF THE EYE AND THEIR TREATMENT. Twelfth Edition. Edited by Louis Werner, M. B., F. R. C. S. I., Sen. Mod. Univ., Dub. Price, \$6.50, net. P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia, 1919.

That this book is appearing in the Twelfth Edition is evidence enough that there is a demand for it. As claimed by the Editor, this edition has been subjected to a careful and complete revision. Among the numerous books on the eye this is one of the few that belong to the first class. Excellently illustrated, it is more than a library book.

G. W. M.

ABSTRACT.

Epidemic Encephalitis.—Loewe and Strauss have given in the *J. A. M. A.*, May 15 1920, an interesting report on the isolation of the causal organism in epidemic encephalitis. Though the naso-pharyngeal symptoms are insignificant or absent, it is decidedly of interest to the nose and throat specialist to know that the portal of entry has been definitely ascribed to the nasal and pharyngeal mucosa.

The conclusions of the authors follow: ,

"1. The Berkefeld filtrates of nasopharyngeal washings from cases of epidemic encephalitis produce characteristic lesions when injected intracranially into rabbits. This finding has served us as an aid to diagnosis in 78 per cent. of the cases so tested.

"2. A minute filtrable organism, identical with that described before us, has been recovered in eleven of the seventeen nasopharyngeal washings cultivated, or 64 per cent.

"3. Inoculation of rabbits with the cerebrospinal fluids of patients with epidemic encephalitis confirmed the diagnosis in twelve of the sixteen fluids injected, or 75 per cent.

"4. Cultures of cerebrospinal fluids have been positive in ten out of twenty cases, or 50 per cent.

"5. Our positive results with cerebrospinal fluid sharply differentiate this disease from poliomyelitis.

"6. Our control studies have been uniformly negative."

D. M.

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Editorial

CHRONIC MIDDLE EAR SUPPURATION: ITS CAUSE AND CURE.

(Continued.)

THE editorial in the July issue dealing with this subject did not get very far, for the simple reason that the problem is so large and intricate as to be incapable of an answer in a few sentences.

Is it possible to effect a cure of a disease without knowledge of its cause? The answer is, Yes, for even after sifting out from the list the imaginary cures there still remains a substantial number that must be accepted as real cures; otherwise all homœopathic physicians must have been deceived or are deliberately deceiving the world.

On the other hand, the treatment of disease without attempting to ascertain the cause is not the most reliable method to pursue. The founder of homœopathy was scientific enough to look into the cause of a disease most carefully, and to remove it, where possible, before prescribing the indicated remedy. This is the most direct method. Our first object should be to diagnose the case, not merely as one of chronic middle ear suppuration—something that a layman can do from the history of a long-continued aural discharge—but to let the diagnosis comprehend every etiological factor in each particular case. Why each particular case? For the reason that the factors which have caused the original acute middle ear suppuration and those which have tended to make of the acute middle ear suppuration a chronic one are not the same in all cases. In a general way middle ear inflammation is due to the spreading of an infectious process from the naso-pharynx up the eustachian tube to the middle ear cavity. The severity of such infection depends upon the virulence of the infecting agent and the susceptibility of the invaded host. This is a simple

enough answer for anyone to grasp; nevertheless, it is not comprehensive enough to cover all cases. Let us ask ourselves the question, Why does not every one exposed to infection acquire the disease? The answer as ordinarily given is that not all are susceptible to the same degree. Well and good. But what is meant by susceptibility? The reply to this question begins to vary somewhat with the individual, according to his notion or prevailing theory.

Another way of putting the question is, Why do some people infected with a particular micro-organism succumb to the infection while others are but slightly affected? The natural reply is that the one who succumbs has a lower resistance or opsonic index to that particular infection than the one who is less affected. The question of general vitality, including the state of nutrition, mental attitude, and a multitude of other equally important factors, rarely enters our minds; for, as a rule, we are accustomed to think in laboratory terms. Yet great teachers in medicine have almost uniformly assigned to these apparently secondary factors a primary importance. If they were not of primary importance how can a circumstance like the following be explained?

A patient, the editor's case, if you please, was operated for chronic middle ear suppuration, with complicating mastoiditis, as thoroughly as he could possibly perform a radical mastoid. Every known local method was used in the after-treatment, in spite of which the discharge continued. The administration of one dose of silica in a high potency cleared up the case. Did the silica reach a factor of primary or secondary importance in the treatment of this case?

That there are more numerous factors in the etiology of every disease, including chronic middle ear suppuration, than is generally considered, is the only logical explanation for so many failures met with in the treatment of these chronic ailments by the average physician, and such wonderful results obtained in isolated cases. It is these cases that encourage him to continue the practice of medicine. Most general men, and many specialists, do not succeed well in the treatment of chronic diseases, and until we understand the causes better than we do at present we are not likely to succeed any better in the future than we have in the past.

Contrary to the prevailing opinion among otologists, the cause of every middle ear suppuration is not the presence of adenoids. If it

EDITORIAL.

were so, then every case of middle ear suppuration should clear up after their removal—and we know that quite a few do not. Of the chronic cases the number of cures by adenectomy are relatively few. There must be a reason. It must indeed be embarrassing to an otologist, after promising a cure by adenectomy for a patient suffering with middle ear suppuration, and then failing to make good his promise, to later find that the case was cleared up by some simple means at the hands of a general man of supposedly less ability. Again there is a reason. If we are to measure a man's ability by his success in the handling of cases, then it would seem that the general man who succeeded where the specialist had failed was a better specialist in that particular line than the specialist himself. However, in the long run the specialist succeeds better in the treatment of special diseases than the general man; but exceptions like the one above cited do occur now and then, but they would not if the specialist was a versatile man and knew enough of the treatment of his cases to include what the general man knew in the handling of the case above cited.

The fact remains that the specialist is too prone to think along narrow lines, in other words, he develops a single-track mind, a thing which happens among those who take up a specialty without having previously served in the wider field of general medicine. If the causes of disease were not so numerous there would be no room for the numerous cults in medicine. It is their phenomenal success in odd cases that gives them prominence and the reason, at least from their standpoint, for their existence. A disease condition is the culmination of numerous factors which work together, each contributing its share in the etiology. (To be continued.)

G. W. M.

THE IMPORTANCE OF GRADUATING FROM A CLASS A MEDICAL COLLEGE.

DURING the last meeting of the O., O. and L. Society in Cleveland a promising young man who had made a success of general practice in New York State, approached the editor, acquainting him with his aspiration to become an eye, ear, nose and throat specialist. The young man had learned from his friend, Dr. Dowling, and others, that there were excellent opportunities in Philadelphia to get what he wanted, and

he was therefore advised to consult the editor. The conference lasted for some time, at the conclusion of which the young physician decided to go to Philadelphia for two years, spending the first year in the Graduate School of Medicine of the University of Pennsylvania, and the second in the private office of a specialist. The editor promised the young man that he would try to secure a place for him in the next class of the Graduate School, the term beginning October 1, 1920.

Upon returning to Philadelphia the editor immediately telephoned to the dean of the Graduate School, asking for a place for his protégé in the next class. The dean replied that the class was limited to twenty men and that it was about filled. This reply was, of course, disappointing and the request was pressed more strongly, whereupon the dean asked for the name and address of the young man in question. After a few minutes' waiting, during which time the dean looked up the credentials of the applicant in the American Medical Directory, he came back at us with the reply that the young man had graduated from a class B college, and that the policy of the Graduate School was to accept only those who could show a diploma from a class A college. Upon pressing the request still more strongly and vouching for the qualifications of the young doctor, the editor succeeded in having him entered in the class.

Now what does this experience teach?

First, that there is a real need for greater opportunities to study the specialties, as indicated by the demand exceeding the supply.

Second, that the Graduate School of Medicine of the University of Pennsylvania is endeavoring to meet the requirements, first, in a qualitative way—excellency of courses, and then later, as circumstances will permit, in a quantitative way—the number of students to be accommodated.

Third, that every prospective student of medicine should see to it early enough in his career to adopt as his future alma mater one that is rated as class A.

Fourth, that in view of the advantages to be obtained by graduating from a class A college, as herewith cited, besides many others that might be presented, it is incumbent upon the management of all medical colleges not in class A to raise forthwith their standard accordingly.

G. W. M.

EDITORIAL.

HEALTH NEWS.

ISSUED BY THE U. S. PUBLIC HEALTH SERVICE.

AN ALL-AMERICAN HEALTH CONFERENCE.

FIRST REGIONAL CONFERENCE IN WASHINGTON IN DECEMBER.

WASHINGTON, D. C.—Special.—The first of a series of regional health conferences authorized by the International Health Conference in Cannes is to be held in this city, December 6-13. It will be devoted to a consideration of venereal diseases which, according to conservative estimates, constitute one of the world's most terrible plagues.

The conference is being organized under the joint auspices of the U. S. Interdepartmental Social Hygiene Board, the U. S. Public Health Service, the American Red Cross and the American Social Hygiene Association. Prof. William H. Welch, of Johns Hopkins has consented to serve as president, and already assurances have been received that some of the foremost physicians and sociologists will participate. Prominent health officers and sociologists from all parts of North and South America will attend.

The conference will review past experiences and existing knowledge as to the causes, treatment and prevention of venereal diseases, and will formulate recommendations relating to a practicable three year program for each of the North and South American countries participating. In addition it will make suggestions for putting such programs into effect.

In speaking of the proposed conference, Surgeon General Hugh S. Cumming, of the U. S. Public Health Service, said, "The United States is in the front rank of the countries which have organized against the Great Red Plague, and a consideration of the various measures which have proved of value in different communities will undoubtedly contribute much to further progress in the countries represented at the conference. More than any other important communicable disease, the spread of the Great Red Plague is inextricably bound up in a mass of social, economic, educational and recreational problems. The success thus far attending the campaign against the venereal disease is due largely to the fact that this interrelation has been recognized and that the campaign has enlisted the coöperation not only of physicians and sanitarians, but of sociologists, judges, probation officers, educators, the clergy and good citizens generally."

THE TREATMENT OF MIDDLE EAR DEAFNESS.*

PHILIP RICE, M. D., F. A. C. S.,

San Francisco, Calif.

TO say that seventy per cent. of those seeking relief for impaired hearing are unsuccessfully treated is to remain well within the limits of a conservative statement. The reason for this undoubtedly is pessimism combined with routinism in treatment. So universal are these twin evils that many of us despair of ever seeing better days. On the whole, we stand about where we did a generation ago in the matter of treatment of this intractable condition. In the matter of confidence we are not in quite so good a position. We once had some faith in the Politzer air douche, for example, but we have lost even this. We cannot but admit that the usual methods of treatment are mournful affairs.

Why is this? It certainly cannot be said that the aural specialists have not been diligent in their efforts. I believe if any criticism is to be made it may be said that they have been too intense; that they have really overdone the thing. This is evidenced in the extremes to which some have gone in the matter of superfine pathologic and diagnostic distinctions. There has been a tremendous struggle made in these questions, the fruits of which show that not infrequently facts have had to stand aside for assumptions, and common sense therapeutic measures for fantastic experiments. The net result of this for many persons is an absolutely incurable affliction.

Is our failure due to the fact that we do not know as much about the subject of deafness as we should know, or is it due to the fact that we know too much about things that are not so or at best of only secondary importance? I believe it is the latter. I believe we have allowed matters that in the last analysis are but end-products to occupy our attention to the exclusion of those that are fundamental, and with the result that we have been led into unprofitable by-paths. The average thesis on this subject is a maze of generalities or else a jumble of assumptions and "high-brow" theories which leave the reader in a state of confusion,—even of incurable pessimism.

*Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

THE TREATMENT OF MIDDLE EAR DEAFNESS.

Very early in my career as an aural specialist I became fired with the ambition to find a cure for deafness, an ambition which no doubt has found a place in the soul of many another. I read everything I could find on the subject. Hope and despair alternated regularly. At one time I felt sure that I was on the high-road to success and at another I was equally sure that no such thing as a cure was possible. It was while in the latter state of mind that I took the first step in the right direction, a step which has led me after some ten years to the point where I undertake the treatment of the average case of middle-ear deafness with as much confidence of helping my patient as any physician can have in the treatment of much simpler ailments. I do not say "cure" because in the great majority of cases the condition has been allowed to reach a point where complete restoration of the local circulation and nutrition is out of the question. But even where complete restoration of function is not possible there is still a possibility of restoring a fair amount of function. It was while in a state of deep depression over my failure to make headway that I decided to throw the entire mass of pathologic and diagnostic theories overboard and simply try to improve the local circulation and let it go at that. Time has proved that this was the only sensible thing I had done in this matter up to that time. I have since proved in hundreds of cases that in directing my efforts toward re-establishing a normal circulation and through this a normal nutrition far better results are obtained than by doing all the other and usual things together. I am firmly convinced that if we will stop chasing the will-o'-the-wisps which have grown out of our assumptions and fine theories and get down to the simple task of feeding the parts we will be far more successful in our treatment. Disturbed circulation ends in time in deficient nutrition. This simple fact all recognize, and with it we are all familiar. The product of such a condition is abnormal deposits in the tissues, hypertrophy, hyperplasia, atrophy, sclerosis, tubal obstruction, etc. Indeed, it is difficult to imagine what may not ultimately develop. It was while in New York about ten years ago that I began to study more carefully the effect of vibratory massage on a condition of this kind. The deeper I got into the subject the more was I convinced that the right kind of vibrations properly applied could be made of immense aid in the treatment of middle-ear difficulties. The kind of massage aurists were applying with the apparatus at their command I was convinced from experience was no good. Not infrequently it did more harm than good. Every instrument I found was built on the

principle of the Delstanche masseur, which we know works on the principle of a pump and produces a pressure and suction effect. This when applied to a tympanic membrane which is already weak from a disturbed nutrition is sure to result in stretching and ultimate relaxation with an aggravation of the deafness. Immediately on my return home I set to work to invent an instrument that would produce an absolutely pure vibration and at the same time be free from the dangerous flaws which I believed all the instruments had.

The apparatus which I now desire to present to the profession, and which I have named the Concusso-Masseur from the fact that it gives a pure concussion vibration, I have used in hundreds of cases during the past ten years and with a degree of success utterly impossible of attainment with the methods of treatment generally employed. I do not claim to be able to cure all my cases, but I am able to distinctly improve 90 per cent. of all that come to me, and of this number 75 per cent. are given practically normal hearing. The apparatus consists of a magnetic coil in the center of which is a movable core, which when energized moves up and down synchronously with the alternating current, thus giving 3,600 concussions per minute; the concussions being produced by the striking of the core on a metal diaphragm over an air compartment. The effect produced is that of a sharp blow which moves a column of air extending from the air chamber through the connecting rubber tube, the catheter and eustachian tube, right into the middle ear. The results from an application of five or six minutes is that of a distinct hyperemia, an increased circulation, which means an improved nutrition. This is the keynote of the treatment. It means in time absorption of abnormal deposits, a revitalization of the histologic elements, a softening and breaking up of adhesions, increased suppleness of the apparatus of hearing and hence improvement in the function. The idea is not offered as being new; efforts along this line have been made for years and instruments of various kind have been offered to the profession, some of which have been of a moderate degree of use, while others have been harmful to a degree that is difficult to estimate. For the Concusso-Masseur I do not claim perfection, but I do claim that it is free from all possibility of doing harm. It cannot possibly cause a stretching of the tympanic membrane and so an aggravation of the trouble; nor can it, by the noise it makes, fatigue an auditory nerve. The sharp blow of air which it delivers against the mucosa stimulates the venous circulation, the tensor tympani and stapedius muscles are

exercised, the internal ear is massaged, which means the nerve fibrils and neuclear cells are exercised and the whole auditory apparatus increased in functional efficiency. I am able to say that I have never yet failed to open an occluded eustachian tube; an achievement which I do not believe any other method can lay claim to. This is accomplished entirely through the excitation of the circulation in the mucosa lining the tube.

At this point let me add, however, that I by no means depend entirely on local treatment in the treatment of middle ear deafness. It would be inordinate folly to try to overcome a tubal occlusion with local treatment which is the result of a sluggish general circulation, a general engorgement of the mucous membranes. My experience leads me now to give most careful attention to the diet of my patients and the manner of their eating. Deficient function on the part of the abdominal organs, whether this comes from a wrong diet or from gluttonous habits, results in sluggish general circulation, mucous membrane engorgement and a host of other conditions which, if not the direct precursor of so-called catarrhal conditions of the upper respiratory tract and ears, are sure to contribute generously to whatever other morbid process may be at work. There comes to mind a patient who was referred to me some years ago for treatment for the gradual loss of hearing, noises, etc. The ears showed the usual condition,—dry, dull, thick and retracted drum membrane, loss of the low tones, increased bone conduction, etc. Inquiry revealed the fact that she was, and for years had been, a very heavy eater. She gave every indication of being loaded with poisons. I advised, and, indeed, insisted on a ten days' complete fast as a preliminary to a course of ear treatments. This she carried out and with the result that she never had to take the treatments. At the end of three weeks she had normal hearing, was free from noises, and greatly improved in her general health. We are in these days giving a good deal of attention to abnormalities in the nose and throat, and wisely so; but I am quite sure we have not gone as far as is necessary in correcting conditions which though more remotely situated are just as directly connected with the ear and just as potent in the production of trouble.

A treatment with the Concusso-Masseur consists of a five or six minutes' application of the vibrations through the eustachian tube and about two minutes through the external auditory canal, varying the time somewhat according to the nature of the individual case. The treat-

ments should be applied daily, at least while Rinné remains distinctly minus, and while the vibration sounds are still somewhat dull; after that three times a week is sufficient.

At this point let me say a word about the importance of making careful tuning fork tests and accurately recording the difference in seconds between A. C. and B. C. In my opinion no other procedure in the examination tells us so much of the actual condition of the case or supplies us with more reliable data upon which to base a prognosis or by which to judge the progress that is made under the treatment. We know that the normal relation between A. C. and B. C. with the C fork is from 20 to 25 seconds plus for A. C. and from 25 to 30 seconds with the C₃ or C₄ fork. A case presenting a minus 20 seconds, that is, Rinné minus, with the C fork is in a distinctly more serious condition than one in which Rinné is only 5 or 10 seconds minus; the prognosis is by no means so favorable. And so a case under treatment which goes from a 20 seconds minus to a 10 and then on to a 5 seconds minus is progressing favorably regardless of what the test for hearing may show. Retrogression must take place, otherwise no progress is being made; the hearing test is not reliable evidence. The cases in which the hearing improves, it may be in an amazing degree, but in which this retrogression from a minus to a plus Rinné does not take place, are not improving in the right way; that is, the results are but transient; with the very next acute head-cold the trouble will return.

The secret of success in the use of the Concusso-Masseur lies very largely in the proper use of the eustachian catheter. Too great emphasis cannot be placed on this point. Unless the instrument lies in such position that the vibrations are sent directly into the tube, and made to penetrate and be distinctly heard with the diagnostic tube, our efforts are largely if not altogether wasted. To be able to hear inflation sounds is no proof that such an adjustment has been achieved. An air current backed up with 20 or 30 pounds pressure can be made to penetrate and be quite distinctly heard though it has to travel a tortuous course. With the milder vibrations of this instrument this is not the case; with this a perfect adjustment must be had. The direction of the beak of the catheter must be in direct line with the axis of the tube, and its tip must be in perfect apposition with the mouth of the tube, otherwise the desired effect is not obtained. A slight addition of air pressure is required in those cases where obstruction exists. When the tube is open the

vibrations are clearly heard without this extra pressure, providing the catheter is in proper position.

Permit me to present a few case records which in a measure show the merits of the instrument and the method:

CASE I. Mr. C. L. Y., age 24. University student. Gives a history of chronic naso-pharyngitis with ear involvement extending over a period of fifteen years. He presents a condition of marked engorgement of the nasal and pharyngeal mucosa and thickening of the lymphoid tissue. The tympanic membranes are thick, white, lusterless and greatly retracted; eustachian tubes only slightly open; mucus rales on inflation. Weber is left. Rinné with C fork in right minus 20, in left minus 15. With C₃ in right minus 10, in left minus 8. Hearing for the watch in right 3 inches, in left 5 inches; for the whisper in right 3 ft., in left 4 ft. Voice was heard at 6 feet but was not able to carry on a conversation; words became blurred and finally lost. After 6 treatments Rinné with C fork was minus 14 in the right, and minus 10 in the left. With C₃ fork it was plus 17 in the right, and plus 21 in the left. Hearing for the watch was 18 inches in the right and 20 in the left, and for the whisper 10 ft. in the right and 12 ft. in the left. At the end of 8 more treatments, Rinné with C was plus 10 in both ears and with C₃ plus 20 in both. Hearing for the watch was 22 inches in the right, and 40 in the left, and for the whisper 15 ft. in the right and 20 in the left. Voice was easily heard at an ordinary distance and conversation was comfortably carried on. Another 8 treatments brought Rinné with C up to plus 15 in both, and with C₃ up to plus 20. Weber was normal. Hearing for the watch 60 inches in both, and for the whisper a little better than 20 ft. This condition has remained after six months.

CASE II. Hugh M., age 13. A deaf mute. Prematurely born. Instrumental delivery. Was severely injured in the skull and given up as dead. Three hours later he was found to be alive. During his first two years exhibited many and severe nervous disturbances. At the end of this time he had an attack of cerebro-spinal meningitis. From this he made a splendid recovery, and except for hearing and speech is a perfectly normal boy. Several years before coming to me he had tonsils and adenoids removed. One year before he had an acute suppuration in the left ear. The right tympanic membrane is negative. In the left there is a large cicatrix in the anterior inferior quadrant; which portion of the membrane was much retracted. Weber was left. Rinné with C was

minus 10 in both ears. The C₃ fork was neither heard by bone nor air conduction. The acumeter was heard 12 inches in the right and 2 inches in the left. Watch was doubtful. The loud voice was heard 12 inches in the right and 4 inches in the left. The tubes were well open. Not the slightest hope was given the mother, yet the treatment was begun and has been carried on quite steadily during the past six months,--- at first daily and later three times a week. The condition at present is Weber normal. Rinné with C is plus 5 in the right and plus 8 in the left. With C₃ plus 15 in the right and plus 17 in the left; the high tones being easily heard. The hearing for the watch is 18 inches in the right and 24 in the left. The whisper is heard at 27 inches in the right and 36 in the left. Conversation voice at 6 ft. in the right and 7 ft. in the left, and the loud voice 15 ft. in the right and 18 in the left. He is learning to form his words and is able to make himself understood.

CASE III. Miss E. H., age 22. University student. Following an attack of measles at six years of age there began a gradual loss of hearing. By the time she was eight she was unable to hear ordinary conversation though was able to hear the sound of the voice. During the past twelve years has depended entirely on lip reading. Sharp sounds have always been painful. The tympanic membranes are thin, dry and retracted. The tubes are open. Nose and throat negative. Weber is equal. Rinné with C minus 11 in both. With C₃ doubtful; uncertain that she heard. Hearing for the watch was contact in both ears, for the whisper doubtful at 2 ft., and for the voice 2 ft., though could not understand what was said. Three treatments each week during the past two months have brought the hearing for the watch up to 35 inches in the right and 30 in the left. For the whisper 15 ft. in both, and for conversation 25 ft. in both. At this distance she is able to distinguish each word when slowly given. Rinné with the C fork is plus 15 in the right and 10 in the left. With C₃ it is plus 28 in the right and plus 20 in the left.

DISCUSSION

BURTON HASELTINE, Chicago, Ill.: Mr. President and Members: While I know very little about Dr. Rice's instrument, I have had considerable experience with the machine invented by Meyer. About fifteen years ago it was gotten out in New York and at that time it was ad-

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vertised in the *Journal of the A. M. A.*, and was promoted quite extensively in New York. It was brought to me in Chicago and I obtained exclusive right for the Mississippi Valley to use this Meyer instrument. Dr. Rice's instrument is almost identical with the Meyer instrument except that his vibrating disc is metal while the Meyer instrument's was mica. It was made practically the same.

I mentioned this matter to this society about ten years ago and a number of men have seen the apparatus in my office. After I obtained exclusive rights, I conducted a free clinic in my office for several months, taking all the patients I could find and giving them treatments; in fact, I devoted my evenings to it for a considerable length of time, being too busy to do it in the daytime—trying to learn what cases would respond and what cases would not. Now by almost any method you will find an occasional freak case and you will get what you will consider marvelous results; then there are a large number of cases in which you will get no results at all. I consider that a man who brings out an instrument of this character for curing catarrhal deafness is under a considerable handicap; we are prejudiced against him in the beginning.

There are two reasons why Dr. Rice is going to meet with some disappointment; first, the prejudice and skepticism on the part of the specialist; there have been so many people who have devised cures for catarrhal deafness.

The other reason is that the promoter or inventor is apt to be too enthusiastic in what he claims for it. I am unable to speak in this particular case of Dr. Rice's claims; I don't know what they are. One reason why I never said very much about the Meyer instrument is that I could not by any means confirm the claims made for it; they are tremendously exaggerated. But, on the other hand, an instrument on this principle is well worth having, and you are depriving yourself of a very valuable aid in certain cases if you have not something of this kind within reach.

ALFRED LEWY, Chicago, Ill.: This instrument is of tremendous importance if it will cure or improve deafness otherwise intractable. Anything that will aid us in our methods of improving the hearing is of great importance, but as Dr. Haseltine has said, so many instruments have been put upon the market that were of no value that we are more or less skeptical. Therefore, I would respectfully suggest to Dr. Rice that in reporting his results of treatment with his instrument he report the

full details of the hearing test, including the fork tests, in such manner that other otologists may arrive at their own conclusions intelligently. In none of the three cases reported by him can I arrive at a diagnosis from the data furnished. I believe that this is necessary in order to have his work accepted by the best otologists. I have often had patients whose wish was father to the thought tell me that my treatment had improved their hearing, only to find on accurate test that such was not the case.

Dr. Rice's machine seems to combine the principles of the French machine, the Kinesiphone, used for re-education of the hearing by graduated sounds and pitch, and the vibratory massage principle, both of which we have tried out separately and with expensive machinery. His ingenuity has combined them at much less expense and in very convenient form, and I hope it will prove successful.

GEO. W. MACKENZIE, Philadelphia, Pa.: I should like to ask Dr. Rice to give us a detailed description of just what he found in these cases cited, so that we may make a diagnosis for ourselves.

DR. RICE (Closing): Many points have been raised which time will not permit me to discuss specifically. Furthermore, I do not believe it necessary. A careful reading of the paper will show that most of them have been answered.

As to the incompleteness of my records for the purpose of diagnosis, a point made by one speaker, let me say that I am not as much concerned about such things as I once upon a time was, and as the gentleman evidently is. I am much less concerned about a technical diagnosis than I am about getting a practical understanding of the condition in order that I may treat it in a practical and common sense manner, and treat it successfully. The evidence which we at present have does not show that the men who strain for a technical diagnosis in every case are really the successful men when it comes to the matter of treatment. I cannot help but think that if they gave more attention of a common sense kind to the treatment of their cases and less to making superfine diagnoses it might be better for their patients. The fact is that these high-brow diagnoses are more often based on assumptions than on a knowledge of the facts.

The one object I aim at in the treatment of middle ear deafness, and the sole purpose for which this instrument was devised, is to excite an hyperemia. The exercise of the parts by the vibratory action of the concussed air unquestionably has a beneficial effect in modifying the

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adhesions and the ankylosis, and must be considered an important feature of the treatment. But the great point is to induce an hyperemia and through this improve the nutrition. It is certainly true that deficient nutrition characterizes every chronic middle ear trouble, and it is my opinion that this is the fundamental factor. Now if this is so then it is clear the logical thing for us to do in our treatment is to seek to improve the nutrition before we attempt to do anything else. The individual case, because of some peculiar phase of the pathologic process, may call for some special consideration; but even so this should never take precedence over the other and more important part of the treatment.

Interstitial Keratitis of Tubercular Origin is well discussed and illustrated in an article by Miller in the August *Pennsylvania Medical Journal*. He confirms the growing evidence that many of these cases are not luetic but tubercular, or mixed tubercular and luetic. Old tuberculin is used as a diagnostic test and also in treatment. For diagnosis O. T. (1/1000 subcutaneous) will often give a reaction in the diseased eye, and in the sites of old Von Pirquet's, in addition to the systemic reaction. Miller does not depend on a single Von Pirquet, but if the first test is negative he repeats in two days. Luetic cases not improving under anti-luetic treatment will often be found to be of tubercular origin, and will improve under a tuberculin treatment.

D. M.

THE USE OF THE X-RAY IN CORNEAL ULCER.*

EDWIN L. HUNTER, M. D.,

Chicago, Ill.

IT was my good fortune to procure one of the first x-ray devices that reached this country, so I have had the opportunity to watch the development of the ray through all its experimental stages. Also I have experimented to some considerable extent in its therapeutic application myself. In its present state of perfection I have a much greater regard for the ray as a therapeutic agent than ever before; results I have obtained in its application to eye-therapy being my main reason for such a statement.

Corneal ulcer and its resulting scar, with opacity and consequent loss of sight, needs no introduction before an audience composed of eye-men, but the degree of repair and restoration of vision in an eye that is blind and unsightly as the result of a vicious ulcer of the cornea is another matter and is my reason for being before you. After much experimentation I have obtained certain definite results in treating corneal ulcer with the x-ray which are not obtained by any other method of treatment and of such worth that anyone doing eye-work, it is my belief, cannot fail to be interested in hearing about what can be accomplished.

My work in skin scars with the x-ray attracted the attention of my office companion, Dr. Haseltine, and suggested to him the application of the ray to corneal conditions. My present method of application of the ray to these cases is one developed through Dr. Haseltine's suggestion, and from experiments which have to do with producing by means of the x-ray as nearly as possible the same process that nature follows in the repair of wounds in general. By that I mean an inflammatory process. But in treating corneal lesions the operator must produce and maintain the right stage of the inflammatory process (of which there are fifteen steps or stages) until the scar-tissue is absorbed to the limit of absorption. Nature's process does wonderful things; but nature unassisted often lags in her work and nature also stops

*Read before the O., O. and L. Society, at Cleveland, O., June, 1920.

short in her work. In other words, the x-ray operator must through the proper application of the x-ray make nature work better while working, and keep her at work until that work is completed. It being possible to produce and maintain any degree of the process known as inflammation through the application of the x-ray, that stage of inflammation which is constructive and not destructive is obtained, and then maintained as long as desired or until the scar tissue in the cornea is absorbed to the fullest extent and the clear transparent condition of the cornea re-established.

My method of obtaining this end is as follows: First the eye is put at rest under atropin; especially is this necessary when treatment by the x-ray is begun while the ulcer is still active. Strict aseptic treatment of the eye and the same general treatment used in treating ulcers is followed, of course. The patient receives in addition the x-ray treatment every alternate day. I seat the patient in front of the tube with the eye twelve inches distant from the anode target. The tube is screened so as to permit the ray to pass through a one-inch aperture. Three exposures of twenty seconds' duration are given with a rest between each exposure of ten seconds. Then three exposures of five seconds are given with five-second rests. The high degree of inflammation and pain which is present in an eye in which there is an active ulcer begins to subside very promptly and the ulcer begins to heal. The healing of the ulcer is much more rapid than in the cases where the old method is the only treatment used, and the process of repair instead of stopping short in its work, leaving a shamefully unfinished job, continues until repair is so nearly perfect as to be really little short of complete.

After watching in repeated instances the progress made in the healing process of a corneal ulcer under my method of x-ray treatment—when pausing to think of the extremely short exposures to the rays, the control of the healing process to such a nicety, the comfort of the patient through the healing stage and the final so nearly perfect conclusion of the case, the operator experiences a feeling of satisfaction that is nearly inexpressible.

To go a little further, the results obtained in cases in which treatment was begun during active ulceration have been so extremely satisfactory that the question naturally arises—what can be accomplished in old or neglected cases? Equally satisfactory results to those in which treatments are begun in the active ulcer stage are obtainable. In

fact, it seems to make little difference so far as the final result is concerned. The aim of the operator in the latter class of cases is to stimulate nature to begin again the work she failed to complete and, as mentioned before, keep her at work until her job is finished. Atropin in the cases of long-standing is not an important factor, as it is in cases in which the ulcer is active. In beginning treatment in old cases I prefer to treat the eye daily, watching closely for the first signs of beginning inflammation either in the conjunctiva or sclera. As soon as I have produced a sufficient amount of inflammation in these parts to favor the process of absorption I discontinue the daily treatments and treat the eye on alternate days, the same as in cases of active ulceration, the length of exposure, with interruptions of rest, being the same in either class of cases. It being a fact that some individuals are much more susceptible than others to the action of the rays, I occasionally find it necessary to stop treatment for a few days to permit a too active inflammation to subside. In such instances simple local measures in the way of a soothing eye-wash during intervals of rest from treatment are probably of benefit.

One case of corneal scar in which there was also a fixed pupil treated with x-ray I wish to mention before concluding, because of the fact that the fixed pupil after a short time under x-ray treatment responded to light so that dilation and contraction of the pupil were nearly normal. In this case it could not be established as a positive fact, but the corneal scar and pupillary condition were probably the result of gonorrheal infection at birth. I mention this particular case because of the possibilities which it indicates may be achieved beyond the results obtained in scars from corneal ulcers.

DISCUSSION

BURTON HASELTINE, Chicago, Ill.: Mr. President, I have no extensive discussion of this subject. It is of interest to me, as Dr. Hunter has said in his paper, because my attention was first attracted by the rather remarkable success he was having in treating skin scars with the x-ray, and naturally I thought if skin scars could be modified by x-ray treatment it would be worth trying in corneal ulcers. The results have been rather more than I hoped.

This is what takes place; the infected area is replaced with normal

tissue instead of cicatrix and when the healing is complete you have a clear cornea.

One of the things you have to watch is inflammation due to the use of the x-ray, although the eye is not so sensitive to the x-ray as one would believe.

HARRY N. SAGE, Columbus, O.: This is a subject that is rather new to me, and one that I am not able to discuss very thoroughly. The thing that appeals to me as I hear the paper is that it follows out the same theory in treating corneal scars and corneal ulcer that we have been following for many years. The application of the x-ray is simply another method of controlling the proper amount of inflammation so that the absorption will take place as rapidly as possible and prevent the formation of new tissue.

E. D. BROOKS, Kalamazoo, Mich.: Regarding the use of the x-ray I have read before this society two or three papers in the same line as Dr. Hunter's. Of course, in this treatment, there are so many seconds application of the ray and so many seconds darkness, alternating in that way. I have used an interrupter for a number of years, probably ten years, arranging it so you can get one flash per second, about one-fifth of a second application and the rest darkness, and in that way you get the stimulating effect of the ray. What you want is the stimulating effect of the x-ray without the destructive effect and by use of the interrupter I have found you can get most satisfactory results.

E. L. HUNTER: I don't know that I have anything to add to the discussion. Of course, there is a risk, and that has been one thing that has prevented me for a long time from presenting this to the Society. It is not anything you want to play with. You must observe the amount of inflammation and know conclusively how far you can proceed. I said this morning that the use of the x-ray was becoming a specialty, and in this particular instance I think a specialist is needed.

WANTED.—An assistant House Physician at the New York Ophthalmic Hospital. Salary, \$20.00 per month and living. Apply to

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A CASE OF RETINAL DETACHMENT.*

WILLIAM H. PHILLIPS, M. D.,

Cleveland, O.

CASES of retinal detachment fall etiologically into two classes, those due to tumor growth in the subretinal tissues, and those due to disease of the vitreous with consequent shrinking of the hyaloid body. By far the larger proportion of detachments belong to the latter class.

As the vitreous shrinks away from the retina negative pressure is created about the choroidal vessels, with consequent serous exudation into the subretinal space: first, above, where naturally negative pressure would be the greatest in the upright position and later below, as the fluid gravitates downward, and then becoming complete if vitreous shrinking continues. Or again, bands of attachment between the hyaloid membrane and the retina may forcibly draw the retina away from the choroid. The vacant subretinal space will then be filled with fluid from the choroidal vessels.

Experience has shown that about eight per cent. of so-called idiopathic detachments are followed by spontaneous reattachments. The balance, untreated, tend to be permanent and are followed by retinal degeneration.

Treatment, whether surgical or medical, has been aimed at the absorption or withdrawal of the subretinal fluid. From a medical standpoint rest in bed, iodid of potash, and pilocarpine have had their day and proved their inefficiency. Twenty years ago Staerkle gave a report of twenty-three cases of retinal detachment treated by subconjunctival injections of from two to ten per cent. salt solutions, with complete reattachment in three, very marked improvement in seven more, and improvement in vision in twenty-one. Many other cases have been reported in succeeding years, showing that this treatment is probably of some real value in selected cases. Of late years dionin has largely superseded the saline solution, but apparently with no great improvement in clinical results.

*Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

In an operative way scleral puncture by knife or cautery, sclerectomy as practiced by Holth or Mueller, iridectomy, and injection of fresh vitreous have been practiced with varying success. Usually these have been followed by temporary improvement, with sooner or later a second detachment. Recently, or since Elliott's trephine has become such a familiar instrument to the oculist, scleral trephining has been added to our surgical resources, and it is a case of this nature the writer wishes to report. Having had some very unsuccessful experiences in the past with retinal detachments, and having a fairly large and successful experience with scleral trephining in glaucoma, it occurred to the writer that the permanent scleral drainage established by the trephine ought to be good treatment for retinal detachment.

The patient whose anamnesis follows offered the first opportunity to carry out this thought. Up to the time of operating on him I had not noted the recent literature on detachment, but, after seeing the prompt and favorable result which followed I ran over my year books to see what experiences with this method had already been recorded. Curtin, Tiffany, Ohm, and Parker in 1915 reported successful cases of scleral trephine for detachment. Since that date the year books record no case reports. Curtin trephined the sclera and then punctured the choroid with an aspirating needle, drawing off the subretinal fluid. Tiffany and Parker after trephining drew out and excised a portion of the prolapsed choroid and retina. Ohm does not state his procedure in this regard. In my own case, after trephining the choroid did not prolapse and no effort was made to incise or puncture it. Whether or not the choroid was injured during the trephining, thus draining directly the subretinal spaces, I cannot say, but no intentional opening was made, yet the results were perfect.

The following is the case: J. S., æt. 56, farm laborer, seen first November 3/19, with the usual symptoms of retinal detachment, left eye, which had occurred suddenly two days before. He was placed in bed with a pressure bandage, dionin instilled t. i. d.; Sodii iodid gr. x t. i. d. This treatment was continued for one week without result. On November 20th, the detachment being above, a conjunctival flap was turned down alongside the superior rectus and 1 mm. trephine opening made in the sclera as far back as possible to the inner side of the muscle. No prolapse of choroid and retina followed, and no attempt was made to puncture either or drain off the fluid. The conjunctival flap was re-

placed and sutured and a compress bandage applied and not disturbed for three days. Examination on this date showed complete re-attachment. He remained in the hospital one week longer and then returned to his home. December 2nd he presented himself at the office. No signs of detachment were present and the fundus presented a quite normal appearance. Both cornæ showed a high degree of irregular astigmatism, the right a moderate degree of conical cornea with central opacity. Refraction gave the following results: R. with — 200 = 200 cyl. ax. 45, 20/200 clearly; L. — 5.00, 20/200 indistinctly. Three weeks later the conditions were the same. I have not been able to get in touch with him since, but feel I should have heard from him had there been a recurrence.

1018-1020 Rose Bldg.

A Pet for Ten Days.—George Patullo, in the *Saturday Evening Post*, gives a layman's point of view of the frailties of specialists.

"'Have you had your teeth examined yet?' I had not; the idea had never occurred to me. * * * 'Have that done at once,' he exclaimed in such lively horror that I knew mine must be an emergency case.

"That day was a revelation; I learned that all human ills spring from tooth trouble. If you have rheumatism, grab a taxi and hit for the nearest dentist. If you are troubled with dandruff and falling hair get your teeth yanked out. * * * If your husband's disposition is unsatisfactory, or you don't like his relations, persuade him to have eight or nine molars pulled. * * * He will then become harmless, and as sweet-natured as a dove."

KALI BICHROMICUM IN AURAL PRACTICE.*

HOWARD P. BELLOWS, M. D.,

Boston, Mass.

IN the pathogenesis of kali bichromicum there is little to indicate that this remedy is likely to be of any especial service in the treatment of diseases of the ear. Not that there is a dearth of symptoms pertaining to the ear, for quite a group of these has been developed in the provings of the drug, but because of their generally indefinite character as indicating any particular form of aural disease. Subjectively we find heat, itching and tickling, indefinite sticking sensations, stitches, sharp lacerations, pulsating pains, and singing and roaring tinnitus. Objectively we find nothing of any real significance in the provings, but in the symptomatology of the drug otherwise obtained there is recorded swelling of the glands of the neck and of the parotid gland; swelling and inflammation of the external canal; an eruptive condition of the canals, extending to the outer skin, with watery oozing, like eczema; an appearance of the tissues within the canal as if they were changed to mucous membrane; a secretion appearing more mucous than purulent, but sometimes thick, yellow and offensive; and, where a perforation of the drum-head exists, a secretion from the mucous surface of the tympanic cavity beyond, which is so thick and tenacious that it can be drawn out through the perforation in strings. . .

Here, in the last statement, lies the chief indication for the choice of this remedy in aural practice, for this is a condition which is far more than local. The actual proving of the drug while not exhibiting this precise symptom in the ear itself developed most conclusively the general action of kali bichromicum upon mucous surfaces throughout the body. The characteristic secretion everywhere is a thick, tough, viscid, sticky mucus which adheres to the surfaces and can be drawn out into strings. Especially in the throat and in the nose we find this condition evident and often associated with it an excessive sensation of dryness of the nose, with tickling as from a hair; the presence of clinkers or tough elastic plugs:

*Presented at the annual meeting of the O., O. and L. Society, Cleveland, O., June,

ulcerative, easily bleeding areas, or scabs upon the nasal septum; fetid smell; and painful pressure at the root of the nose. In the mouth and throat, in addition to the characteristic stringy mucus, we may find a red and dry condition of the parts, with burning and shooting pains in acute stages; the tongue with a heavy yellowish-brown coating at the base; the soft palate and uvula relaxed; and the tonsils swollen, with possible areas of ulceration.

Here, then, in the state of the nose and throat rather than in that of the ear itself, we may find the leading indications for the choice of kali bichromicum in an aural condition. Furthermore, other indications, still more general than its action upon mucous membranes, have been furnished by the true pathogenic provings of this drug which will still further aid the aurist in his choice of the remedy. I refer to the marked tendency of patients to rheumatic troubles and to the alternation of rheumatic and gastric symptoms; to headache, chiefly frontal; to the appearance of pain in small, circumscribed spots; to the quick migration of pains and their quick development and disappearance; to excessive weakness and states of prostration; and to the general aggravation in the morning and from cold, and amelioration in the evening and from heat.

The point which I wish to make is that in the choice of kali bichromicum as a remedy in diseases of the ear we must be guided less by the condition of the ear itself than by that of the nose and throat, and that we must especially be led to its choice by the general systemic indications. Also, that when so chosen its action in the aural sphere will be much more gratifying than its rather limited and indefinite aural pathogenesis would lead us to expect.

Let me cite one case from my own practice in illustration. The patient, a maiden-lady sixty years of age, first consulted me in March, 1913. She had had a succession of bad colds and heard poorly. There was constant tinnitus like locusts. Catarrh of the nose and throat for years. Worries a great deal and living conditions hard. Rheumatic tendencies. No heredity. No serious illness in past five years. No headache or dizziness. Digestion good and sleeps well. Not constipated. Canals dry. Mtt. thickened and depressed. Light spots absent and malleus foreshortened. Weber equal. Rinné positive on both sides. All forks heard, but Galton 1.2 on both sides. H. D. for 40 inch watch = 4 inches right and $\frac{1}{4}$ inch left, rising to 10 $\frac{1}{2}$ inches right and 1 $\frac{1}{2}$ inches left after treatment by inflation, vibratory massage and the high-frequency

current. Diagnosis, O. M. C. C. + beginning nerve involvement. Prognosis, written at the time, "Can stop progress and get some hearing back."

This patient has remained under my care for seven years and I can most briefly present my report in periods of one year each.

FIRST YEAR.—Number of times treated 42. Highest hearing before treatment, 8 inches right and 9 inches left. Treatment: inflation, vibratory massage and electricity. Remedies prescribed at various times, kali mur., merc. prot., merc. dulc., caust., arsen., and merc. sol.

SECOND YEAR.—Number of times treated 41. Highest measurement as above, 16½ inches right and 22½ inches left. Treatment continued as above. Remedies, hydrastin mur., merc. bin., strychn. phos., bry., rhus tox., and kali bich. 3x, first given three weeks before the close of the year.

THIRD YEAR.—Number of times treated 28. Highest measurements before treatment, 46 inches right and 51 inches left. Treatment: electricity, either Faradic or high-frequency, and nothing else. Inflating stopped. Remedies: sulph. one week, merc. dulc. one week, and kali bich. 3x, four or two doses a day, all the rest of the time.

FOURTH YEAR.—Number of times treated 16. Highest measurements 51 inches right, and 54 inches left. Treatment: electrical only, with high-frequency or rapid sinusoidal current. Remedies; arsen. one week, merc. dulc. one week, and nothing else but kali bich. as needed, the catarrhal condition being the index of the need.

FIFTH YEAR.—Number of times treated 13. Highest measurements 53 inches right, and 57 inches left. Treatment: electrical only, as above. Remedies: merc. dulc. one week, arsen. one week, and kali bich. the rest of the time as needed.

SIXTH YEAR.—Number of times treated 13. Highest measurements 42½ inches right and 49 inches left. Treatment: electrical only. Remedies: arsen. prescribed once, carbo veg. once, and kali bich. as needed.

SEVENTH YEAR.—Number of times treated 11. Highest measurements 43 inches right, and 48½ inches left. Treatment: one inflation after a cold, and rapid sinusoidal current alone. Remedies: nux vom. one week, kali mur. one week, and kali bich. the rest of the time as needed.

The following is the record in detail at the beginning of the eighth year of treatment:

Steady tinnitus, like locusts, continues. Is scarcely noticed in the middle of the day but is worse at night and much worse when fatigued. Hears everything without difficulty. Weber equal. Rinné positive both sides. All forks from C — 1 to F₄ heard. Galton 1.2 right and 0.5 left. Mtt. still thickened and depressed and light spot absent. Hearing distance 44 inches right, and 49 inches left, becoming 53 right and 56 left after treatment by the rapid sinusoidal current. Hears watch relatively better than voice.

The question may be asked why was the treatment of this case not discontinued long ago. The answer is that the patient likes an inspection every four weeks to be sure that the improvement is maintained, especially as there are times when the measurements are considerably reduced. It may be asked why the electricity is used at each treatment. I answer because the hearing distance is always increased by its use, and when the first measurement is below the average the effect is especially marked. It may then be questioned why not attribute the gain to the electricity and not to the remedy used. I reply because for two years electricity was employed in the same manner, and other local measures as well, and the gain was only very moderate as compared with that which followed the exhibition of the kali bichromicum. Also it is very apparent that the catarrhal condition of the nose and throat, together with the tendency to rheumatism, is markedly under the control of the remedy. I therefore claim the major part of the improvement for the remedy, but fully concede the minor credit which is due to the electricity in addition.

It remains to refer to two local uses of the bichromate of potash in aural practice. The first is that first suggested and practiced by Dr. W. P. Fowler, of Rochester, N. Y., who touched the pedicle which remains after the operative removal of an aural polypus with the saturated solution of this salt in water, several days in succession, for the purpose of preventing any renewal of the growth. I think this has become a common practice among all of us, and we extend its use to any granulation tissue within the ear.

The second local use is one which, so far as I know, is original with myself. I refer to its employment in establishing a permanent perforation, with healed edges, in the tympanic membrane. I have never yet failed to attain this end when desired, and employ the following method.

With a small crystal of chromic acid, securely fused upon the tip of an applicator, I produce a perforation, at the desired point upon the drum-head, which is somewhat smaller than that which I wish to maintain permanently. For two or three days in succession, and again at the end of a week, I touch this perforation with a saturated solution of the bichromate of potash in water, applied upon a small bit of cotton on the tip of an applicator, so that the edges are thoroughly moistened. The result, in my experience, is all that can be desired, I have practiced this method for many years and have referred to it in published papers on one or two previous occasions. I commend it to your trial.

DISCUSSION.

HERBERT D. SCHENCK, Brooklyn, N. Y.: This paper deserves careful consideration and discussion because it is prepared with Dr. Bellows' usual discrimination and careful analysis of the drug which few of us are able to make. We have so few *materia medica* papers these days that I welcome the opportunity to say a few words in commendation of our remedies as sheet anchors in the treatment of diseases of the ear.

Kali bichromicum has rarely entered my mind as a remedy for any ear conditions where there was lacking a thick, tenacious discharge from the ear which is characteristic in other parts of the body. Dr. Bellows says that thick, stringy discharges from the nose and throat are its chief indications in aural practice. Dr. Allen in his *materia medica*, commenting upon the general action of the drug, notes that it produces a general catarrh of the mucous membranes and frequently erosions and ulcerations of the throat, nose, stomach, etc. He notes under the ear symptoms that clinically it has been used in conditions of suppurations and eczema, but does not mention any catarrhal condition of the middle ear. Dr. Boyle, in his compilation of homœopathic remedies useful in the ear, simply mentioned "Catarrhal affections in general," with great prostration and exudation of ropy, stringy mucus.

In the Transactions of the New York State Society for 1898 in an article upon the treatment of chronic suppurative ears the following indications for the use of this drug are given: Sticking and stitching pains in the ears and mastoid process; roaring in the ears; drawing pain. Useful where there is a thick, yellow, heavy, discharge that is tenacious and ropy, with stitching pains and itching in the middle ear. Indolent ulceration

of the drum. Granulations that throw off a dark, tough, ropy mucus that may be offensive.

I have used this drug as a prevention to the return of polypi successfully for many years, but I have not practiced the perforation of the membrane which Dr. Bellows says has proved useful in his hands.

In calling our attention to Kali bich. Dr. Bellows has certainly done a distinct service and I shall have it more carefully in mind than I have heretofore in the treatment of ear diseases.

The Care of the Teeth.—J. R. Snyder, *J. A. M. A.*, August 14, 1920, gives some illuminating statistics on the disability arising in school children from lack of care of the teeth. The poor health resulting is largely responsible for the high percentage of pupils being forced to review their grades. Figures compiled from the statistics of cities show that from 20 to 30 per cent. have to repeat their terms, a factor which absorbs in some cases as much as 40 per cent. of the school budget. The symptoms met with as caused by poor teeth are often not striking, but rather, indefinite low-grade conditions, which Snyder describes thus:

"The child may not show a proper interest in things that are attractive to the normal child. The appetite may be capricious, the child often spurning good wholesome food while craving sweets. He may be as reluctant to go to bed at night as to get up in the morning. He may be nervous and fidgety or lethargic; he may be emotional or apathetic; he may be precocious or a dullard; sometimes he is incorrigible. To the uncommonly observant, many indications are apparent of the child's being below standard—sometimes mentally, sometimes physically, sometimes in both ways."

D. M.

SOME RECENT DEVELOPMENTS IN THE TECHNIQUE OF TONSILLECTOMY.*

ALVA SOWERS, M. D.,

Chicago, Ill.

IT is our purpose in this essay to review some of the recent developments in surgery of the faucial tonsils. We will not discuss the indications for tonsillectomy, as that is a subject much too big for the time allotted this paper. It is quite generally agreed that tonsillectomy is frequently indicated, and it is quite as universally believed that tonsillectomy (that is, complete extirpation) is preferable to tonsillotomy, or partial removal, as was formerly done.

Granting the necessity of the operation for the complete removal of tonsils, let us consider some of the problems that may be met and the newer methods of dealing with them.

One of the most serious complications of tonsillectomy is hemorrhage, which, though frequently discussed, we are inclined to believe is not regarded with due gravity by the average operator. We are not alone in this opinion, as is shown by an article recently written by J. Z. Bergeron, of Chicago, and published in the April issue of the *Illinois Medical Journal*, in which he points out the menace from loss of blood. He points out the necessity for combating shock after tonsillectomy, just as is done in all other major surgical operations. In other words, he makes a plea for "bloodless" tonsillectomy.

It may be argued that bleeding will not harm the patient, and in many cases this is perhaps true, but if blood-letting is our object let us perform a phlebotomy and not a tonsillectomy. On the other hand, the patients who are most in need of an operation are often those least able to stand shock, and the loss of but a small quantity of blood is detrimental. Such patients, for example, may be cited as anemic girls, infants, debilitated individuals with cardiac and rheumatic complications, who have large or small necrotic pus-bearing tonsils, which act as a continual source of toxic absorption. There is no doubt of the necessity for operation in these cases. From an ounce to a pint of blood is lost in the usual pro-

*Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

cedure; even a small amount is injurious, since physiological shock from loss of blood is added to surgical shock from instrumentation, anesthesia, etc.

We have all seen cases in which following a severe hemorrhage a prolonged convalescence ensued. The injury in these cases is obvious. It is the small, primary hemorrhages, which are usually ignored that should command our attention.

We have frequently noticed in the recent literature reports of lung abscess following tonsillectomy. The probability of aspiration as the etiological factor is very strong. Profuse bleeding with poor anesthesia could surely be regarded as sufficient cause for aspiration pneumonia or lung abscess.

In practically all surgical procedures, bleeding of the small vessels is stopped immediately with hemostats, which crush the tissues for a few minutes, when they may be removed without further annoyance from hemorrhage. In the case of large vessels it is necessary to ligate.

With the La Force tonsillectome this principle may be carried out. The instrument possesses two blades, one of which is dull and is used as a crushing instrument in just the same manner as hemostats are used by the general surgeon.

Enucleation is accomplished by forcing the tonsil through the fenestra of the instrument in just the same manner as is described in the well known Sluder operation. The tonsil being engaged, the dull blade is gently driven home, crushing the tissue in its grasp for a period of three to five minutes. During this time the sharp blade is turned down, severing the tonsil from its base. The tonsil is grasped with forceps and removed, though the instrument may remain in place for several minutes after the removal of the tonsil. If there have been no vessels of unusual size severed, the bleeding will be negligible. In many cases the secretion of the throat is scarcely stained. If a large vessel is severed it may be necessary to ligate, as in any other technique, but this instrument in uncomplicated cases can be depended upon to minimize the bleeding tremendously. We employ the instrument in all primary operations except in cases where there is a history of quinsy. It is sometimes necessary in these cases to resort to the dissection method.

Next to hemorrhage there is no more important phase of the tonsil question than that concerning the anesthetic. The above operation is more adaptable to general anesthesia; therefore, we will omit the con-

sideration of the relative merits of the various forms of local anesthetics, and pass at once to the question of general anesthetics.

For young children, ether is still the anesthetic of choice, but for adults we want especially to call your attention to nitrous-oxide oxygen. Some years ago, Dr. Ira O. Denman, of Toledo, pointed out the advantage of this anesthetic, but so far this form of narcosis has not come into general use. We believe, however, it is a step-in advance in tonsil surgery. It can be recommended for its safety, its complete narcosis and its freedom from nausea. The greatest drawback, perhaps, is the fact that a skilled anesthetist is essential.

For many years it was our policy never to employ a general anesthetic for adults. This policy was adhered to rigidly, and in some instances the patient chose another surgeon who was more obliging in the matter of anesthesia. There are some hypersensitive individuals to whom the thought of a cutting operation, while they are awake, is so terrifying that it causes a severe nervous if not physical shock. There are others who do not seem to stand pain well.

It therefore seems advisable to use a general anesthetic if we can do good work without greater risk to the life of the patient. Nitrous-oxide oxygen answers this purpose to our entire satisfaction.

Preparation of patient for this anesthetic is practically the same as that for local anesthesia. It is our custom to have a complete physical examination made previous to the operation, paying particular attention to heart and lung findings. In addition, a coagulation-test is made of the blood, as well as an analysis of the urine.* The patient goes to the hospital during the forenoon for the preliminary examinations and laboratory tests. Lunch is omitted. About twenty minutes previous to the operation a 1/6 grain of morphin and 1/150 grain of atropin are administered by hypodermic. This hastens the anesthetic and inhibits the flow of mucus during the operation.

The patient is placed on the operating table and two or three minutes are all that is required to produce narcosis. The first tonsil is clamped off and the anesthetic is continued by way of the nose until the operation is completed. With the La Force instrument we feel that it is well to leave the dull blade clamped at least three minutes with each tonsil. The operation being completed, oxygen only is administered for a few seconds and the patient is awake before leaving the operating room, little the worse for the experience he has had.

ALVA SOWERS.

With the La Force operation, combined with gas anesthesia, we feel that we have robbed tonsillectomy of its greatest terrors; namely, fear of pain, hemorrhage and nausea.

30 N. Michigan Ave.

The Physiognomy and the Weak Eye.—Have you noticed the difference in appearance between the two halves of the face particularly manifest in the patient with one eye predominantly stronger? The disuse of the weak eye will produce a composure of the same side of the face that will markedly contrast with the opposite side. There is at times apparent the same effortless “desire” to see from out the weak eye as is seen in the infant. There is no evidence of alertness, no expression of the individual’s character, nothing but a certain lassitude. The experiment can easily be made by holding a card in front of the observer.

D. M.

“**The Vestibular Tests** give more information than the auditory tests in the localization of lesions involving the cerebellar fossa and brain stem. and when considered in connection with the auditory tests they are of great value, although these tests should never be depended on to the exclusion of other methods in arriving at a diagnosis.”—E. R. Carpenter, *J. A. M. A.*, Vol. 75, No. 7.

D. M.

FUNCTIONAL ETHMOIDITIS.*

HAROLD A. FOSTER, M. D.,

New York, N. Y.

IN the realm of rhinology catarrhal ethmoiditis frequently presents itself for treatment, a condition so generally recognized that I will not dwell upon it here. In fact, one of my reasons for not considering it is that it is so generally recognized; but I do wish to call attention to an important cause of catarrhal ethmoiditis not nearly so widely taken into account. The condition I am going to discuss might be described as a result of passive congestion, but I have adopted another term which, though it may be wrong in nomenclature, is expressive in meaning. This name is functional ethmoiditis.

As has been said, every physician is familiar with catarrhal ethmoiditis and its causes;—catarrhal inflammation; obstructions that prevent drainage of the cells; irritations brought about from scrofulous, tubercular, or syphilitic sources; influenza; trauma, and pus infections from frontal and maxillary sinuses. These, of course, are well known causes, and are recognized by every physician who has to deal with them; but as for this other type, or functional ethmoiditis and its causes, I believe that such is not the case. This cause is not as generally recognized as it should be, and consequently, does not receive the attention it merits.

Any bodily disorder causing a passive congestion of the turbinate tissue may cause functional ethmoiditis. One which occurs with a fair degree of frequency, according to my experience, and the only one of the many that I will discuss is uterine fibroid. Its nasal manifestation is marked—a swelling, or hypertrophy of the turbinate, so pronounced as to prevent drainage of the ethmoid cells.

I am not sure by what route the fibroid uterus affects the turbinate tissue; I am only sure that it does so. However, I might suggest that the effect is reflex, or might attribute the connection between the two to the vasomotor nervous system. Certainly the fibroid patient often has degeneration of the heart-muscles; also the same patient often has hyper-

*Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

trophy of the turbinates. The frequency with which the two conditions co-exist strongly suggests that the same thing causes both, and it seems only reasonable, therefore, that the route by which the trouble is carried is the circulatory system.

In the condition I am describing, and which I have chosen to name functional ethmoiditis, the following results are noted: The turbinate tissues are enlarged and darker than normal—the application of cocaine and adrenalin will cause contractions—and there is a muco-purulent discharge. The symptoms are impaired freedom of nasal respiration, together with periodic colds, followed by symptoms of acute catarrhal ethmoiditis.

Now a fact which connects functional ethmoiditis with uterine fibroid is that inquiry often elicits the presence of or history of operated fibroids. When these fibroids are of long duration there is apt to be a chronic catarrhal ethmoiditis from the swollen erectile tissue, which actuates the periodical attacks. And even in the cases where there has been a removal of the fibroids, while the nasal breathing is less impaired the attacks are comparatively more marked, and these attacks, as the patient frequently complains, come at the time of her regular periods.

The next questions are those of prognosis and treatment. As for the prognosis, this is not very encouraging. There is apt to be some chronic or permanent tendency to local irritations. As for the treatment, that should be both general and local.

The general treatment involves, of course, the elimination of uterine tumors. This is a matter for the surgeon to decide. As for the local nasal treatment, it should not include surgery. In fact, operative procedures are contra-indicated. This is proved by the fact that many of these patients who have undergone operative processes on the erectile tissues eventually develop sinus infections. In other words, since the real cause of the trouble is not in these tissues, operation on them does not permanently relieve. The indicated remedy, then, is not local operation but local treatment, and the local treatment is the Dowling argyrol-tamponade, done properly and at the proper time.

In closing I wish to emphasize the importance of a most careful diagnosis, for only by such means can the right treatment be arrived at. It is futile to look to rhinology for the cure of a trouble which has its real origin in uterine fibroid. And let me repeat my firm belief that the local treatment in functional ethmoiditis is not surgical interference. The in-

ABSTRACTS.

icated remedy is, as I have said, the Dowling-tampons. This remedy will give relief. But for permanent betterment of the case here, as everywhere else in the realm of medicine, we must get to the source of the trouble.

204 West 55th Street.

DISCUSSION.

HARRY N. SAGE, Columbus, O.: Mr. President, I wish to express my appreciation of this paper. One thing among other things I don't know much about is these types of functional ethmoidities. We probably have had several cases of functional ethmoiditis in the last few years. We have endeavored to make certain diagnoses; haven't done much surgically and have had very little results. The cases that are most common have a discharge of thin, watery, burning fluid, chiefly in the morning—three, five or six o'clock in the morning. For three years our treatment has been the use of the Dowling tampon, which we still continue. I have found most of these cases among women, and most of them among unmarried young women.

I am unable to say—we have made no investigation along that line—whether it could be referred to a pelvic disturbance or not, but I do feel that it is due to some disturbance in some other part of the body.

ABSTRACTS.

Diagnosing Measles By Koplik's Spots.—"The positive diagnosis of measles before the eruptive stage has a very important significance from the standpoint of protecting the public health. That evidence of the disease exists in every case and some time before the rash, in the form of Koplik's spots, is stated in most convincing terms by Dr. Jacob Sobel, Assistant Director of Child Hygiene, New York Department of Health, in a recent issue of its *Monthly Bulletin*. An extract from the article is as follows:

"Before describing the sign—Koplik's spots—attention must be called to the fact that in order to detect it, strong daylight is absolutely necessary. Ordinarily, gaslight is entirely unsatisfactory, and the sign is frequently overlooked when it is used. A white Welsbach or electric light sometimes answers, but strong daylight is always preferable. This sign, or Koplik's phenomenon, consists, to quote the author, 'of small, irregular spots of a bright red color; in the center of each red spot is seen a minute bluish-white speck. There may at first be only

two or three or six such rose-red spots, with a bluish-white speck in the center. The combination of a bluish-white speck with a rose-red background on the buccal and labial mucous membrane is absolutely pathognomonic of the invasion of measles. Sometimes the bluish-white speck is so small and delicately colored that only in a very direct and strong daylight is it possible to bring out the above effect, but the combination is always present.' These rose-red spots, with a minute bluish-white speck in the center, may be few in number, or so numerous as to cover the whole inner surface of the cheek. They frequently appear first on the buccal mucous membrane, opposite the location of the last molar teeth. When once seen and thoroughly understood they will always be remembered and never confused with anything else. These spots are not removed by ordinary manipulation, such as eversion of the mucous membrane of the lips and cheeks by means of the fingers or tongue depressors. Forcible swabbing of the mouth, however, sometimes removes them, and this, too, may account for their absence in some cases. They may be removed by the use of thumb forceps. Microscopically, they are said to consist of bacteria, mostly diplococci, sometimes streptococci and epithelial scales."

The importance of familiarity with this sign is in the opportunity it gives for early isolation and prevention of spread of the disease. The spots appear from one to five days prior to the rash.—*Bull. B. of H.*, Philadelphia.

D. M.

The Decrease of After-Nystagmus During Repeated Rotation.—Coleman R. Griffith, *Laryngoscope*, March, 1920, as the result of a series of experiments on white rats conducted in the psychological laboratory of the University of Illinois, clears up in some measure points hitherto disputed, especially by Drs. Fisher and Babcock.

"It has been commonly observed that long persistence in whirling movements may reduce in intensity the distressing symptoms of dizziness. This reduction under repetition has suggested that the accompanying ocular movements may also tend under persistent practice to disappear." This has been further substantiated by subjects who were rotated daily for three minutes over a period of two or three weeks. "At the end of this period the subjects had lost, either wholly or in

part, the 'after-nystagmus' which usually persists, as we have seen, when the body comes to rest."

The investigator takes issue with Drs. Fisher and Babcock, who consider the results just referred to as pathological or as due to "gaze-fixing" of "a few subjects." He then points out that these same two authors furnish evidence in their Table II for the very reduction which they deny. Using only one turning to the right and one to the left, "*in every single case the average nystagmus is less for the second five days than for the first five days.*" After citing in detail the method used in his experiments upon the white rat, and his reasons for having selected this animal, Griffith reaches the following conclusions: "After-nystagmus in the white rat decreases in intensity and duration, (a) from day to day, (b) within the series of a single day."

He further states that Fisher and Babcock tried to explain away the demonstrated loss of after-nystagmus under repetition, (a) by charging that the human subjects were "pathological," and (b) by referring the observed decrease to a vicious practice acquired by a few subjects of "gaze-fixing" upon a distant object. "It is not clear just how their explanation can be extended to the white rats."

W. G. SHEMELEY, JR.

Barium Shadow of Bronchial Tree in Man.—O. A. Rösler, *Medizinische Klin.*, March 21, 1920 (Abstr., *J. A. M. A.*, June 26, 1920), reports with roentgenogram the case of a man fifty years of age with carcinoma of the œsophagus. In straining to swallow the suspension of barium for roentgenoscopy it went astray into the air passages, and suddenly the entire bronchial tree cast a distinct and perfect shadow, the thin barium paste having rapidly spread throughout the whole. This was later coughed up, with no bad results following. The patient did not survive the removal of the cancer, sixteen days after this occurrence. Paralysis of the vocal cords is given as the cause of this alarming experience. He believes that this should be taken as a warning against straining to swallow with cancer in the upper œsophagus.

H. L. GOWENS, JR.

Roentgenography of the Nasal Accessory Sinuses.—H. H. Briggs says that, "It is just as essential for every clinician to be able to interpret

the roentgenogram—although he may not have made it—as it is for him to perceive the translucency of the sinus by electric light. Every sinus plate reveals details to the interpreter which no one can fully describe to him, and to operate from another's findings is like striking where someone points."—*J. A. M. A.*, July 31, 1920.

D. M.

In **U. S. Army General Hospital No. 21**, Carmody states, "We examined probably 3,000 men. Of the known cases of tuberculosis of the lungs, laryngeal involvement was present in 95 per cent. There has been a difference of opinion as to what constitutes tuberculous laryngitis. Many cases are not diagnosed clinically. The Roentgen ray is of great value in diagnosis."—*J. A. M. A.*, July 31, 1920.

D. M.

About 9 per cent. of men and 2 per cent. of women among healthy individuals are color blind. This color blindness is of a degree sufficient to be dangerous in occupations requiring recognition of colored signal lights in about 3 per cent. of men and $\frac{1}{2}$ of 1 per cent. in women.—*Bull. U. S. Pub. Health Service.*

D. M.

Colored Lenses and Transmission Percentage.—Color (of the lens) *per se* is not a safe indicator of the probable absorption or transmission. Ambers of the same tint vary enormously in the limits of transmission in the short wave length region as well as in the percentage of energy transmitted in the visible regions. Chas. Sheard, *Amer. Jour. Phys. Optics*, July, 1920.

D. M.

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Editorial

CHRONIC MIDDLE EAR SUPPURATION: ITS CAUSE AND CURE. (Continued.)

TO ascertain the cause of Chronic Middle Ear Suppuration one must possess an accurate knowledge of the anatomy, not only of the external, middle and internal ear, but, too, of the surrounding structures; he must possess an intimate knowledge of the physiology of these same structures; he must be familiar with the subject of general pathology; he ought to have some knowledge of general medicine, the more the better, and finally he should develop an analytic mind if he does not already possess one. These are requisites necessary to the most successful practice of otology; there may be others less essential. The question arises, Is this not expecting a great deal of one individual? It surely is, but then there are others upon whom we may call for help if it is necessary. The otologist needs the pathologist, the internist and the neurologist quite as much as they need us. Our frequent failures in the treatment of Chronic Middle Ear Suppuration is proof of the fact that we need to be better posted on the several subjects referred to above, failing in which we should at least possess enough discretion to call in assistance from others.

Why is it necessary to possess an accurate knowledge of the anatomy? For instance, in order to understand how a post-nasal infection can spread to the middle ear and how the infection once in the middle ear can spread to the mastoid cells; to know the size of the lumen of the Eustachian tube in health and how much swelling of the mucous membrane it takes to occlude it and thus interfere with drainage. The position and conformation of the Eustachian tube orifice must be known in order to be able in a given case to recognize whether it is normal or not. The isthmus of the tube must be known, its location and normal amount of narrowing.

One could trace the anatomy beginning at the mouth of the tube to the middle ear spaces including the mastoid and indicate one reason after another why a knowledge of the anatomy is essential to the successful treatment of middle ear affections. A hundred and one reasons could be cited if time and space permitted to show the importance of a knowledge of the anatomy.

Why is it necessary to possess an accurate knowledge of the physiology? If one did not possess a knowledge of the physiology how could he possibly recognize deviations from the normal functions? For the normal functions of hearing and of equilibrium the anatomy of the structures must be unimpaired. We recognize deviation from the normal anatomy, that is pathologic conditions (excepting congenital anomalies), by aberration of function to certain stimuli; in the case of the hearing organ to sound waves and in the case of the non-acoustic labyrinth to variations in body position and motion (active or passive) through space. To recognize aberrant reactions and estimate their degree we must be thoroughly familiar with the normal physiology. Indeed a knowledge of the normal physiology is most essential for one to be able to recognize the existence of pathologic processes, irritative or destructive. The physiologically working ear responds to definite stimuli, after a definite manner, for a definite length of time to a definite amount. No one realizes this better than the fellow who has studied these functions in a great many normal individuals. No one not familiar with the normal response is in a position to pass accurate judgment on any case of Chronic Middle Ear Suppuration. Yet it is being attempted right along in the big as well as in the smaller towns. A great deal could be said in this direction but it is hardly necessary at this time. Volumes have been written on the physiology of the ear which added together is yet insufficient.

Why is it necessary to know so much about general pathology? There are many reasons. Clinical pathology is generally better understood than anatomic pathology. The latter is the only pathology recognized by the out and out pathologist who in turn confesses his ignorance every time he asks the clinician the symptoms and signs in a given case before he ventures a diagnosis. General pathology is very little different from special pathology. The pathology of inflammation, whether of the productive or destructive type, is the same no matter whether the inflammation is in the liver or in the middle ear cavity. Granulomatous infiltration, tuberculous, syphilitic or otherwise presents the same general

characteristics under the microscope independent of the location involved. Each particular inflammation produces the same trend of local phenomena and the same type of symptoms modified but slightly by the location. Syphilis, for instance, tends to follow the same clinical course in all parts of the body modified somewhat by the character of the connective tissue involved and it yields to the same form of treatment. The toxemia attending the absorption of the inflammatory products depends in a measure upon the richness of the lymphatics in the neighborhood of the lesion. Volumes could be written on the subject of general pathology and the bearing a knowledge of the subject has upon the successful treatment of Chronic Middle Ear Suppuration, but this is not the intention at least for the present.

Why does one need to know so much about general medicine? This question any one can answer, but the otologist who has devoted some time to the practice of general medicine can answer it better than the other fellow who has not. Let us consider briefly but one general disease, namely, Diabetes mellitus. Every practitioner is aware of the susceptibility of Diabetes to gangrene, and, in fact, to all pyogenic infections. Besides it is generally well known that inflammatory processes do not respond well in those affected with Diabetes. The question, among many others, that the otologist should ask himself in a case of Chronic Middle Ear Suppuration is, Can Diabetes be a contributing factor in helping to keep up the suppuration? In pronounced cases of Diabetes the suppuration takes on certain peculiar characteristics with which the well-posted otologist is familiar. These include caries and gangrene with the typical thin, dark colored, characteristically foul discharge. Every general disease influences more or less local suppurative processes which must be considered in the treatment of the local condition. Every internist concedes this. The specialist trusts that the internist will as readily concede the fact that faulty general conditions frequently result from neglected local conditions not infrequently located in the middle ear. It is not necessary to write a volume to prove the contention that the success in the handling of Chronic Middle Ear Suppuration requires also a knowledge of general medicine, the more the better, and that the successful handling of general conditions requires at least some knowledge of the specialties.

Why is an analytic mind necessary? There is nothing in the vast variety of human endeavors that requires more thorough detective work

than the solution of the problems that arise in medicine. Especially in the very subject we are dealing with. This has been so generally acknowledged and by such men as Conan Doyle that it has become axiomatic. There is no more intricate problem for one of analytic mind to work out than that of Chronic Middle Ear Suppuration. There are so many factors at work, each contributing its part in the cause of this disease that no one with a real inclination toward analysis can possibly lose interest in the problem before him. Though he may fail in its solution at times he never loses interest.

ZONES OF COLOR INTENSITY.

FERREE AND RAND, in the July issue of the *American Journal of Physiological Optics*, publish an excellent article on color perception areas. The most evident conclusion that comes to the reader is that his past perimetric examinations have probably been greatly influenced by the intensity of the objective color, which goes to support the pleas we hear for a standardization of examination methods with regard to light. Working with the same instrument under identical light conditions the individual examiner no doubt obtains consistent and comparable results in his experiments; but for the use of others these results are usually unsatisfactory and often misleading.

The same holds true in other fields of investigation—as in hearing and turning tests in examinations of the ear; unless the diagnostic technique is considered fully in such examinations, the comparative value of these tests in different cases is lost.

It is interesting to note that these experimenters have found that the “far periphery is not blind to red, blue and yellow. It is merely deficient in sensitivity to these colors—that is, with stimuli of sufficient intensity the limits of blue, red and yellow coincide with the limits of white light vision. The blindness for green, however, is for our observers absolute.”

This article again appeals for the standardization of light in eye work, as did the earlier studies of these investigators.

D. M.

MORE COMPLAINTS AGAINST ASPIRIN.

THE editorial note in the August issue of the *American Institute of Homœopathy*, entitled "Aspirin in the Discard," is well worth reprinting in an effort to stamp out a growing evil.

"Dr. W. A. Dewey has supplemented his paper on 'The Great German Drug Propagandistic Collusion' in the March, 1919, *Journal* by another paper on Aspirin in the *Homœopathic Recorder* of April of this year. The author reiterates the perils of aspirin in characteristic strong English, for instance: 'Being so readily obtained without even a physician's prescription, it is being used in large quantities by drug addicts of all kinds, and the present advertising campaign is helping to defeat those who are endeavoring to banish the drug addiction habits of our people,' and 'We may assert without fear of successful contradiction that pneumonia, pulmonary edema and septicemia were more frequently the results of the aspirin treatment than the result of the influenza poison, for the reason that there was none of these complications in influenza cases treated from the beginning without this drug.'

"There should be a definite campaign among physicians in the education of the laity on the perils of aspirin. Dr. Dewey is quite right that the free selling of aspirin over the drug counters belongs in the same category as unsupervised selling of narcotics."

D. M.

O., O. AND L. SECTION MEETING IN RICHMOND, VA.

THE Southern Homœopathic Medical Association has invited the O., O. and L. Society to participate in their convention to be held at Richmond, Va., in the month of November. Your President desires to acquaint the members of the Society of the fact and begs them to turn out in force. Aside from the regular scientific program there will be a special meeting of the O., O. and L. Society to talk over subjects of importance to the Society.

N. B.—Place of meeting, Hotel Jefferson, Richmond, Va.

Date of meeting, Thursday, November 18th.

TRANSACTIONS OF THE THIRTY-THIRD ANNUAL
MEETING OF THE AMERICAN HOMŒOPATHIC
OPHTHALMOLOGICAL, OTOLOGICAL AND
LARYNGOLOGICAL SOCIETY.

STATLER HOTEL, CLEVELAND, OHIO, JUNE 21, 22, 23, 1920.

FIRST SESSION, MONDAY, JUNE 21, 9 A. M.

Meeting called to order by the president, Dr. William McLean.

Thereupon, Dr. Dean W. Myers, moved the adoption of the program, which motion was duly seconded and carried.

The President then appointed Dr. J. S. Gaines and Dr. L. E. Hetrick Committee on Attendance.

Announcement was made that the usual custom that the past presidents would constitute the committee on nominations would be followed.

Dr. William H. Phillips and Dr. Ella G. Hunt were appointed Committee on Press.

The Secretary then read his report for the year 1919-1920, as follows:

SECRETARY'S REPORT.

Members of the Homœopathic O., O. and L. Society:

I beg to make my second annual report as secretary for the year of 1919-1920.

Early in this year a circular letter was mailed to every member of the Society inviting each member to co-operate by reporting any original work they had been doing or to prepare a paper on some phase of our specialty in which they were particularly interested, or to report some interesting case. They were asked to notify the Bureau Chairmen, whose names and addresses were included, and also asked to notify the secretary. Special attention was called to the need of new members.

In the February issue of the O., O. AND L. JOURNAL there was an able appeal from our President, Dr. McLean, urging the active co-operation of each member in this year's meeting. This was followed in the March number by another letter from the secretary again asking for more papers, and asking the authors who had already promised co-operation to send in their papers not later than April 1st, so that an abstract of their paper might be published. In this same letter the titles

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of some of the papers already secured by the Bureau Chairmen were presented. The need of new members was again stressed.

In the April issue the members were again urged to send in the titles and abstracts of their papers immediately.

In the May number of the JOURNAL there appeared a complete list of papers of each of the bureaus as then completed, with abstracts of several of the papers. The need for new members was again emphasized.

The different Bureau Chairmen have worked with untiring energy and efficiency and as a result of their efforts you have the program which is before you. Some of the papers had discussors selected by the Bureau Chairmen, but most of the discussors were selected by the secretary. Unfortunately, few of the authors sent in abstracts of their papers in time to have them published. Following the suggestion of Dr. Myers at the last meeting, the business session had been put on the first and second days, thus allowing a fuller discussion of the issues that may come up and allowing of a third business session in case any might be needed.

The secretary wishes to express his approval of the plan of having Bureau Chairmen arrange the papers in their various bureaus. It was deemed advisable not to have each bureau presented in its entirety in sequence, but to have the different bureaus divided up so that there would be a greater variety of papers presented at each session. This, it is thought, would insure a larger appreciation of the papers presented.

Letters have been written to each author giving them the names and addresses of the men selected to discuss their paper. They were requested to send copies of their paper to each of the discussors. Letters were also written to each one of the discussors. Programs were put in the mail June 10th so that every member should have received a copy.

I think you all appreciate the importance of having a monthly journal going to each member of the organization. This enables the officers of the society to send frequent notices to the membership at practically no expense.

Considerable effort has been made to add suitable men to our list of members. One man has been selected in each state and asked to be a committee of one for new members in his state. The response, however, has not been as generous as we had hoped for.

The following expense account of the office of the Secretary is herewith submitted:

1920.

TRANSACTIONS OF THE THIRTY-THIRD ANNUAL MEETING.

Sep.	19.	Stamps	\$2.00
Oct.	18.	Stamps	2.00
Nov.	7-19.	Envelopes	15.50
Dec.	6.	Reg. package88
Jan.	10.	Stamps	1.50
Feb.	5.	Stamps	10.00
Dec.	31.	Telegrams to McLean53
Feb.	12-20.	Multigraphing Co.	2.75
Mar.	9.	Stamps	10.00
May	3.	Greg, Mayer & Thom, long envelopes	18.00
"	3.	Wire to Moon45
May	29.	Telegram40
"	29.	Telegram to Champlin53
June	2.	Telegrams	1.20
"	10.	Stamps	12.00
"	16.	Programs	62.00
"	16.	Stenographer	20.00

\$159.74

NEIL BENTLEY,

Secretary.

Motion was made by Dr. Dean W. Myers, seconded by Dr. Fred C. Sage, that the report of the Secretary be accepted, which motion was duly carried.

The Treasurer then read his report for the year 1919-1920.

Motion was made by Dr. Gaines, seconded by Dr. Dean W. Myers, that the report of the Treasurer be accepted, and that an auditing committee be appointed to report their findings before the end of the session. This motion was duly put and carried.

Thereupon the Treasurer suggested that the members of the Society consider the advisability of charging 25c or 50c to those requiring buttons. No action was taken on this.

The Treasurer also suggested that it would be well to have the business manager of the JOURNAL and the treasurer of the Society a combined office, or that one person hold both offices. No action was taken on this.

Dr. Ella G. Hunt, Necrologist, then made the following report:

During the last year we have lost two members. Dr. Norton was

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so well known to us no address could add to the keenness of our sorrow in having lost him, and so instead of giving an account of either, will the members please rise and I will just read the names.

Dr. Walter E. Reily, Fulton, Mo.

Dr. A. B. Norton, New York City.

Dr. Dean W. Myers moved the adoption of the report of the necrologist, which motion was duly seconded and carried.

Dr. Irvin D. Metzger not being present, the Treasurer read the application of Dr. H. R. Wynn, Ann Arbor, Mich., and Dr. Dudley A. Williams, of Providence, R. I.

Dr. Burton Haseltine moved that each man be elected to membership upon payment of his dues, which motion was duly seconded, put and carried.

The scientific program was then taken up.

At the conclusion of the President's address the following committee on the address was appointed: Drs. W. H. Phillips, J. I. Dowling, and I. O. Denman.

The following papers were read and discussed:

"Some Factors in the Production of Enlarged Tonsils," J. A. Ferree.

DISCUSSION: E. D. Brooks, G. W. Mackenzie, G. B. Rice.

"An Unusual Case of Sinus Thrombosis," Dean W. Myers.

DISCUSSION: J. I. Dowling, Alfred Lewy, Philip Rice, R. I. Lloyd, L. E. Hetrick, B. G. Clark, Burton Haseltine.

"Functional Ethmoiditis," H. A. Foster.

DISCUSSION: H. N. Sage.

"Sinus Surgery as Applied to the Eyes and General Health, and Lantern Slides Showing Some Pictures of Original Sinus and Other Work Along These Lines," J. Ivimey Dowling.

DISCUSSION: I. O. Denman, R. C. Cooper, G. B. Rice.

Meeting adjourned until 2 p. m.

SECOND SESSION, MONDAY, JUNE 21, 2 P. M.

At this session the following papers were presented:

"Report of a Case of Retinal Detachment," Wm. H. Phillips.

Discussion of Dr. Phillips' paper as well as the examination of a patient of Dr. Phillips by Dr. Mackenzie, were merged, and owing to the shortness of time no discussion was had.

"The Medical Treatment of Naso-Pharyngeal Catarrh," F. C. Sage.

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DISCUSSION: Mary L. Lines.

"Modern Conception of So-called Bronchial Asthma," Burton Haseltine.

DISCUSSION: A. W. LeForge, I. C. Denman, D. W. Myers, J. R. McCleary, W. H. Phillips, A. H. Gordon, F. C. Sage, Alfred Lewy.

Meeting adjourned until Tuesday, 9 a. m.

THIRD SESSION, TUESDAY, JUNE 22, 9 A. M.

The meeting was called to order at nine o'clock a. m. pursuant to adjournment and the following proceedings were had:

Dr. Metzger, Chairman of the Board of Censors, made report as follows:

Mr. Chairman and fellow members, the Board of Censors passed on sixteen applications last night favorably. Since that time I have received two others which I desire to present before the meeting.

(Applications read.)

Thereupon Dr. Sage moved that the names as recommended by the Board of Censors be balloted upon collectively. This motion was duly seconded and carried.

Thereupon ballot was cast by the Secretary and applicants declared members upon payment of dues.

The Treasurer, Dr. Muncy, then reported the resignation of Dr. Bissell, of Rochester, and Dr. B. G. Clark, of New York City.

It was moved by Dr. Metzger, seconded by Dr. Mackenzie, that the resignations be referred to the Board of Censors for consideration. Motion upon being put was duly carried.

The Auditing Committee reported the Treasurer's books to be O. K.

ELECTION OF OFFICERS.

Committee on Nominations composed of ex-presidents of the Society.

Present, G. B. Rice, Chairman; Dean W. Myers, Burton Haseltine, W. H. Phillips, J. Ivimey Dowling, G. A. Shepard, C. L. Rumsey.

DR. G. B. RICE, Boston, Mass.: It is with great satisfaction that I present the following names:

For President—Dr. Geo. W. Mackenzie, Philadelphia, Pa.

First Vice-President—Dr. Alfred Lewy, Chicago.

Second Vice-President—Dr. C. E. Beeman, Grand Rapids, Mich.

Secretary—Dr. Neil Bentley, Detroit, Mich.

TRANSACTIONS OF THE THIRTY-THIRD ANNUAL MEETING.

Treasurer—Dr. Wm. Muncy, Providence, R. I.

Necrologist—Dr. Ella G. Hunt, Cincinnati, Ohio.

Board of Censors—Chairman, Dr. Alva Sowers, Chicago; Dr. W. H. Williams, Middletown, Ohio; Dr. W. J. Blackburn, Dayton, Ohio; Dr. LeRoy Thompson, Chicago; Dr. Seymour B. Moon, Pittsburgh.

As a past president, I may be allowed to say that it is very gratifying to see the growth of this Society in the past ten years. It has been most astonishing. Owing to ill health, I have not been able to keep in touch with the Society's affairs. Having recovered my health, and again being able to be active with you, I am most happy to note the progress of the Society. Ten years ago it was most unusual to hear a paper showing original research; now it is most unusual to hear one that does not show original research, and this is most gratifying.

The progress is due in a great measure to such men as Dr. Mackenzie, who I am sure will serve us with efficiency, and will increase the efficiency of this Society.

Thereupon Dr. Fred Sage moved that ballot be cast for the men named for the respective offices. This motion was duly seconded, put and carried.

After the casting of the ballot by the Secretary the President declared the result as follows:

Dr. Geo. W. Mackenzie, President; Dr. Alfred Lewy, First Vice-President; Dr. C. E. Beeman, Second Vice-President; Dr. Neil Bentley, Secretary; Dr. Wm. Muncy, Treasurer; Dr. Ella G. Hunt, Necrologist.

Board of Censors: Dr. W. H. Williams, Dr. W. J. Blackburn, Dr. LeRoy Thompson, Dr. Seymour B. Moon, and Dr. Alva Sowers, Chairman.

REPORT ON PRESIDENT'S ADDRESS.

The Committee wants to congratulate the Society this year in having for its President a man who had the honor of being invited to Oxford to appear before the Oxford Ophthalmic Society and to have as its president one who has produced a tonometer such as Dr. McLean's.

Now the Committee has considered the suggestions which Dr. McLean made. We realize the fact that clinical teaching in this line is important and the necessity for teaching students in our School; and when a man takes the course that is going to be offered him within the next year or two, he is going to have training that has been almost impossible to get in the past.

With the exception of Dr. Mackenzie's course in Philadelphia the New York Ophthalmic has offered the best course of training, but we feel that just as with Mexico and Russia, the changes will have to come from within. Some four or five years ago a committee was appointed by this Society, and we spent several days at the Ophthalmic trying to impress upon the members of the Ophthalmic what the Society desired and what help they would give the Ophthalmic in establishing better teaching methods. There was considerable co-operation given by the Ophthalmic and quite a number of changes were made.

Now Dr. McLean made very strong representations, in fact, practically a request, that the Society enter this field; and the Committee makes a recommendation that a committee be appointed by the Society, of which Dr. McLean should be chairman, with the privilege of appointing his own committee to take charge of this work.

We, therefore, Mr. Chairman, make recommendation that a Committee on Medical Education be appointed by this Society, of which Dr. McLean shall be chairman, and that he shall be privileged to appoint as many or few assistants as he may deem advisable.

W. H. PHILLIPS,
Chairman.

Thereupon, for the purpose of action on the above report, Dr. J. A. Ferree temporarily took the chair.

After considerable discussion by various members, motion was made by Dr. Phillips, seconded by Dr. Dean W. Myers, that the report of the Committee be adopted, with the recommendations made and that the Society appoint a Committee on Medical Education, Dr. McLean to act as chairman.

This motion upon being put was carried unanimously.

The following papers were then read and discussed:

"Closure of Permanent Opening of Membrana Tympani," W. J. Blackburn.

DISCUSSION: Alva Sowers, Alfred Lewy, Burton Haseltine, I. O. Denman, Dean W. Myers.

"Some Interesting Ear Cases," Alfred Lewy.

DISCUSSION: E. L. Hunter, G. W. Mackenzie.

"Studies of the Normal and Pathological Mastoid by the Roentgen Ray," Walter C. Barker.

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DISCUSSION: R. H. Stevens, R. I. Lloyd, G. J. Alexander, Burton Haseltine, E. L. Hunter.

"Observation of Radium and Roentgen Ray Treatment of Laryngeal Carcinoma," G. J. Alexander.

DISCUSSION: R. H. Stevens, G. B. Rice, W. Barker.

Adjourned until 2 p. m.

FOURTH SESSION, TUESDAY, JUNE 22, 2 P. M.

The following papers were read and discussed:

"The Report of a Case of a Pin in an Eye for Four Months," D. W. Weaver.

DISCUSSION: E. D. Brooks, Neil Bentley, C. L. Rumsey, W. M. Muncy.

"The Use of the X-ray in Corneal Ulcer," E. L. Hunter.

DISCUSSION: Burton Haseltine, H. N. Sage, G. D. Arndt, Alva Sowers, E. D. Brooks.

"Headache," George B. Rice.

DISCUSSION: Alva Sowers, F. C. Sage.

FIFTH SESSION, WEDNESDAY, JUNE 23, 9 A. M.

Papers read and discussed

"Physiological Considerations in Refraction," I. D. Metzger.

DISCUSSION: G. A. Shepard, R. I. Lloyd, Fred C. Sage.

"Epiphora," S. B. Moon.

DISCUSSION: J. Ivimey Dowling.

*The Curability of Catarrhal Deafness," Philip Rice.

DISCUSSION: Burton Haseltine, Alfred Lewy, G. W. Mackenzie.

Adjourned sine die.

Wanted—Copies of the January Issue.—If any reader of the JOURNAL has a copy of the January, 1920, issue that he does not need and cares to part with, the editor will gladly buy it back at the regular subscription price.

HEADACHE.*

GEORGE B. RICE, M. D.,

Boston, Mass.

FOR some years it has seemed to the writer that so prominent a symptom as headache should be more thoroughly studied, and that the information obtained from text-books and medical journals was not sufficiently condensed for practical purposes. He was much gratified, therefore, when at last a book came into his hands, by Auerbach, published in 1913 by the Oxford University Press, which proved of great interest, in that it not only classified headaches but discussed their varying causes in a very clear and satisfactory manner. In 1918 Sluder, Professor of Diseases of the Nose and Throat in the Wahsington University at St. Louis, published a book on "Headaches and Eye Disorders of Nasal Origin," which gave added significance to the subject.

Headache, properly speaking, is pain felt in the interior of the skull. Auerbach's classification is as follows: Migraine, neurasthenic headache, nodular headache. Headache in brain disease, with the subclassification of cerebral tumor, acquired hydrocephalus, meningitis, and encephalitis. Hæmatoma of the dura mater, cerebral and cerebro-spinal syphilis, cerebral antero-sclerosis; headache in disturbance of brain circulation, associated with disease of the heart and lungs; the headache of hysteria and of epileptics; traumatic headache, headache associated with disorders of the special senses; the eyes, the nose and its accessory cavities, the teeth, the ears. Headache in diseases of the digestive tract, diseases of the kidneys, and in acute infectious diseases, and in acute and chronic intoxication, such as produced by alcohol and tobacco and coffee. Headache in constitutional diseases, such as anæmia, chlorosis and diabetes.

There are of course cases where a combination of these causes may be present. Leszynsky condenses this classification as follows: Toxemia,—neuropathic, reflex, and circulatory.

No attempt will be made to describe these varied forms, with the exception of three types which seem to command special attention, viz., migraine, ocular headaches, and the headache of nasal and accessory sinus

*Read before the O., O. and L. Society at Cleveland, O., June, 1920.

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origin. Migraine has often been confused with other forms of headache. It has been variously designated bilious headache, sick headache, blind headache, and hemicrania, although the latter form, given by Galen, is not correct, for it has been found that the bilateral form occurs in about one-third of a large number of cases studied.

Migrainé, as has been said, may stimulate other forms, but it always has certain characteristics not common to others. One of these is its periodicity, the frequency of the attack varying with the individual from weekly visitations to monthly, or even yearly. The disease begins in childhood or youth and is not confined to any class, although brain workers and those whose occupation does not allow an open-air life are most susceptible. Mœbius found heredity to be a marked influence in a study of ninety cases. The attacks do not necessarily occur in nuerasthenics, but the highly developed nervous type of patients are more prone to the disease.

The exciting cause may be found in emotional disturbances, especially anger, mental over-exertion, over-use of alcohol and tobacco, and sexual excesses. Digestive disorders, according to most authorities, play a comparatively small part in producing attacks, but according to Haig any condition of the eliminating organs which interferes with their function must be considered a causative factor.

The attacks frequently begin in the morning on waking from sleep, and are sometimes preceded by a sense of depression, irritability or anxiety. In the ocular form the attack is initiated by a darkening of the field of vision, by flashes of light, and by other phenomena. One curious condition described by Horatio C. Wood is that in some cases the attacks may be ushered in by a peculiar taste, as though an electric current had passed through the mouth. More frequently there is a bitter taste in the mouth, and a disagreeable breath, comparable to the odor of sulphuretted hydrogen.

Saint Remy,* in an article in the *New York Medical Journal*, says true migraine is caused by tumefaction of portions of the middle turbinated body in contact with a deviated septum. That this definition is incorrect will be seen later in this paper. Ocular headache is of special interest. It should be remembered that a very considerable portion of the brain and cranial nerves are concerned in the requirements of vision, and

**N. Y. Medical Journal*, March 25, 1916.

as a consequence eyestrain is a very common causative factor. Weber, of Philadelphia, says the ciliary muscle in its efforts to secure for its possessor the best possible vision under unfavorable conditions, provokes an irregular discharge of nerve-energy along the ocular motor nerve nucleus upon which it depends for proper control. This produces irritation of the fifth nerve nucleus, with its termination in the forehead. With this ache there goes a deep, dull pain, proceeding from the centres themselves, and from the cortex through the sympathetic to the dura mater. Soon the whole front of the head aches, and a typical eyestrain headache is produced. Another authority* does not believe that muscular error accounts for so many cases of headache as ametropia (defective images on retina and defective refractive power). He presents a series of two thousand cases, and found the location in 70% frontal, 16% occipital, and the remaining 14% temporo-occipital and vertical.

Auerbach's explanation of the phenomena of ocular headache seems more comprehensive. He says that "eyestrain falls upon the muscles of accommodation and the internal recti, through the action of which convergence takes place. If the contraction of these muscles takes place under unfavorable conditions, dependent upon abnormal structure or temporary pathological conditions of the organ, a cramp-like, protracted muscular spasm occurs. By means of excessive innervation this obstacle is sought to be overcome. Hereby, as by every muscular spasm, sensory nerve-endings are irritated; in this case these lie in the area of distribution of the first branch of the fifth nerve, the ophthalmic.

"The pain remains at first confined to the eye, if the irritation increases in degree and duration it spreads to the ophthalmic nerve itself, to the tentorial nerves springing from these, and in its further course to the other branches of the trigeminus, from which the branches supplying the rest of the dura spring. Thus pain in the forehead is followed by pain all over the head. The irritation may also extend to the supraorbital nerve and then causes typical neuralgia in its course. If the excessive innervation leads to an increase of intra-ocular tension there may be consequent phenomena of retinal irritation, flashes of light, luminous scotomata, etc., with the resultant clinical picture of migraine. With cessation of the muscular spasm, the above mentioned consequences cease."

No age seems exempt from ocular headache, and as would naturally

*Zimmerman, of Philadelphia.

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be expected a weakened nervous organization, together with undue eye-strain from working in a poor light, or from excessive, concentrated and prolonged use are predisposing causes.

Most authorities agree that a typical ocular headache grows worse toward evening, and is better after a night's sleep. Frontal sinus headache and migraine are usually worse in the morning. Again ocular headaches are usually bilateral, the pain is likely to be frontal or temporal, and is relieved by training and correction of refractive errors. Nasal and accessory sinus disease in its relation to headache is of peculiar interest because of the comparatively recent discoveries in this field of observation. We are all familiar with the headache of frontal sinus congestion and empyema; the intense almost unbearable headache, worse in the early morning hours, aggravated by stooping, or by any exercise which jars the body. We, of course, know that the inner angle of the orbit is very sensitive to pressure, and that during the period of intense pain the mental activities are diminished, but the relations of other forms of nasal and accessory sinus disease are not so generally understood. The sensory nerve supply of the nose and accessory cavities is from the first and second branches of the fifth nerve. The anterior and posterior ethmoidal nerves arising from the frontal branch of the first or ophthalmic division, innervate the mucous membrane of the anterior portion of the septum, the anterior ethmoidal cells, and the frontal sinus. The second or maxillary division supplies the floor of the nose, and the maxillary antrum, while the posterior portion of the nasal cavity, and septum, and the posterior ethmoidal cells and sphenoids, rise from the sphenopalatine ganglion.

We may then recognize that pain in the inner angle of the orbit, aggravated by pressure, denotes disease of the anterior portion of the nasal cavity, of the frontal sinus, and anterior ethmoidal cells; and pain localized more deeply in the head would indicate disease of the posterior ethmoidal cells, and the sphenoidal cavities. Several authorities have advanced the theory, now well established as a fact, that diseases which produce headaches, but which at the same time allow the sufferer to live his allotted life, are disorders which involve the nerves, independent of the brain centres. So disease of the nasal cavities and accessory sinuses, excepting the pus cases, may continue through a lifetime, incapacitating the patient to a certain extent, causing much suffering, but not directly causing death.

Sluder, in the work referred to at the beginning of this paper, described three varieties of nasal disease producing headache and eye dis-

orders, which are generally unrecognized. These are: First, a closing of the frontal sinus without suppuration; second, the syndrome of nasal ganglion neurosis, and third, the picture of hyperplastic sphenoiditis.

Time forbids the discussion of but the first of these conditions, which has been termed by Ewing vacuum headache. It is a low grade continuous headache, without nasal symptoms, aggravated by use of the eyes. One of the diagnostic points in determining this symptom is known as Ewing's sign, which is a tender spot at the upper, inner angle of the orbit, at the point of attachment of the pulley of the superior oblique muscle. Here the floor of the frontal sinus is very thin. The reason for this phenomenon is that, owing to obstruction to the outlet of the frontal sinus through a deflected septum, a septal spur or ridge, an hypertrophy of the middle turbinated body, or from tumor formation, the air in the frontal sinus becomes absorbed, and negative pressure causes hyperemia, followed by congestion and pain. Occasionally the same symptoms are produced by closure of the anterior ethmoidal labyrinth.

This condition has been observed many times in the author's practice, and in some instances satisfying results have been obtained by comparatively simple operative procedures, as the following examples will show. One of these cases presented the following conditions:

CASE 1. Miss M., age 30, occupation, teacher, consulted the writer Feb. 14, '13, through the courtesy of Dr. David W. Wells. This patient complained of a pain in the left eye in the morning, with dimness of vision, and a general full, dull feeling in the head a good deal of the time. The localized pain was of only two weeks' duration, but the full, dull headache of some years' standing. She had suffered from nervous exhaustion some two years previously, from which she had recovered. She also gave a history of periodic headaches since childhood. Dr. Wells reported a neuro-retinitis, with numerous small hemorrhagic areas. Vision, 5 +.

Examination disclosed a sensitive area at the left inner angle of the orbit, imperfect transillumination in the ethmoidal and frontal sinus region. Examination of the intranasal passages disclosed a sharp deflection of the superior portion of the perpendicular plate of the ethmoid to the left, compressing the middle turbinated body to a marked degree. There was slight bleaching of argyrol tampons, but no pus could be seen, nor was any obtained by use of the suction pump. The pain was so severe the next day that operation was decided upon.

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Under local anesthesia the middle turbinated body and anterior ethmoidal cells were removed, and the sphenoid was opened. Catheterization of the frontal sinus was negative, and no pus cavity was found. Following this operation the vision improved, and the pain was dissipated. Dr. Wells reported Feb. 26th that the vision had improved to 8 +. January 17, '19, the patient reported at the office, stating that she was free from headache, and her vision seemed normal. The writer thought this a pus case before operation, but it was evidently a vacuum headache, with acute exacerbation.

CASE 2.—Jan. 9, 1920, Mr. M., age 47, occupation druggist, had suffered for several years with frontal headache; not periodic, but aggravated by head colds, and use of the eyes. At times the pain would be very intense, and at all times there was a sense of fullness and pressure in the forehead.

Examination showed a deflection of the superior portion of the septum toward the right, with an hypertrophied middle turbinated body on the left side. Pressure on the inner angle of both orbits caused much pain. Transillumination of the sinuses was fairly good; argyrol tampons reacted slightly but did not bleach. Suction was negative. An operation on both middle turbinated bodies was suggested.

The patient came again to the office January fifteenth, when under local anesthesia the anterior portion of both middle turbinated bodies was removed, and after considerable difficulty the frontal sinus was probed. With a probe as guide the fronto-nasal canal on both sides was enlarged with a curved rasp. The patient went to the hospital for four days, suffering more or less pain during this period. Ten days later he reported at the office and stated that he felt very much relieved. He said it was as though a load had been removed from his brain. Last week he telephoned the writer, after an interval of four months, that he was entirely free from headache, and felt well in all ways.

CASE 3. Miss R., age 32, occupation, housemaid, consulted the writer November 17, '19, complaining of frontal headache, occasionally extending to the occipital region. The headache was worse in the morning, aggravated by slight colds, and had been continuous for several years. At times the pain was so severe as to incapacitate her from work. Her general condition was fairly good. Urine examination negative. Her eyes had been examined some months previously and glasses prescribed, but without relief.

Examination disclosed large middle turbinated bodies on both sides, with a superior deflection of the perpendicular plate of the ethmoid on the right side; no pus could be seen, and none followed the use of the vacuum pump. Ewing's sign was present on both sides. Transillumination was negative. There was considerable redness about the middle meatus, but very little over-secretion of mucus. After some weeks of treatment with internal remedies, and argyrol tampons, without relief from the pain, operative measures were decided upon.

February 17th, under local anesthesia, the anterior portion of both middle turbinated bodies was removed, with superficial curettement of the anterior ethmoidal cells. Both frontal sinuses could then be probed. The tissues healed promptly, and in a few days the pain was much lessened. Feb. 27th the patient reported complete relief from the pain. A telephone inquiry May 30, '20, brought the information that the patient had been completely cured of all the old symptoms, and was in excellent health.

The writer presents these three cases to illustrate a rather common condition which has received too little attention. The fact that abnormal contact of the nasal septum and turbinated bodies, irrespective of nasal obstruction, will produce hyperemia, inflammation, over-secretion of mucus, and pain is not new. So long ago as 1890 Dr. O. B. Douglass demonstrated this fact at the Manhattan Hospital. He urged that a partial vacuum was produced posterior to the contact-area. The vacuum headache of Ewing is therefore a direct development of this teaching.

DISCUSSION.

ALVA SOWERS, Chicago, Ill.: Mr. Chairman and Fellow Members: I feel very much as Dr. Rice does—this is a subject that requires study. The books of Auerbach and Sluder, to which Dr. Rice refers, are very excellent.

Without doubt the most common affliction which torments the white race is headache in some form or other. It may be a symptom of deranged physiology of practically any part of the human anatomy. The conscious sensation known as headache must be the result of some affliction or irritation of that great sensory fifth nerve, or trigeminus. This irritation may be a direct one by pressure or inflammation, by reflection from other cranial nerves via anastomoses, or by direct action of toxic

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substances brought to the nerve from other parts of the body by way of the blood-stream.

In considering the numerous forms of headache one must bear in mind the tremendous variation in etiology, pathology, and symptomatology. Functional, organic, or mechanical factors must be considered, for the treatment and relief depends upon an exact determination of the underlying causes.

In conclusion I wish to compliment Dr. Rice on his very comprehensive analysis of this ever-present problem.

FRED SAGE, Waterloo, Ia.: I just want to report a case that I had last week. A lady came to me, a young married woman about thirty years of age, and she had very severe headaches—had been to practically every physician around; some pretty good surgeons had examined her. I think she had had a couple of operations, but the headaches continued, and that really was her main symptom. They came to my office the other day; her husband said he wanted a general X-ray picture made of her whole head to find out what the trouble was. Well, I went over her case very carefully, using transillumination and other methods, and found absolutely no antrum or sinus trouble or of the mastoid region, or anywhere else.

She mentioned a number of times having a peculiar feeling in her face; mentioned that a dozen times. She could not describe it; said sometimes it ached and sometimes it was numb. Now her headaches occurred so frequently and were so severe that the woman was bordering on a nervous collapse.

I looked at her teeth and found she had two teeth with slight cavities. One tooth, the lateral front incisor, I believe, I thought needed attention. I took her down the next day to a dentist who had an X-ray picture made. He found that she had one tooth growing from this incisor straight back into the roof of her mouth. He tried to extract it and could not. The next morning I took her to a dentist specialist, who did nothing but extract teeth, and he, after some little difficulty, extracted the tooth. The tooth was growing right back in the roof of the mouth. I never saw anything like it. I simply mention this case to show that you can go into all the scientific factors that are mentioned in the paper and sometimes you will give no relief until you look elsewhere. I am satisfied in my own mind that the removal of this tooth relieved those headaches.

Later report showed a complete cure.

THE ACUTE LARYNGITIS OF SINGERS AND ACTORS.*

THOMAS L. SHEARER, M. B., C. M., EDINBURGH; F. A. C. P.,

Baltimore, Md.

THE ordinary form of acute laryngitis which is most frequently encountered in practice—particularly in the case of singers and actors, as well as of public speakers, is that known as the catarrhal type. While the symptoms accompanying the latter are common to every individual so attacked, there is on the stage another element which renders much more difficult quick successful treatment of such patients. We have then a person who under the ordinary occupations of life would make a point of completely resting the voice until the severe and very acute symptoms of the inflamed larynx had had an opportunity to subside, but who is playing an important part in a drama or opera, and, therefore, under all circumstances must endeavor to perform, or cause the play-house to close its doors for the night—with, probably, the house sold out to capacity. In some instances, it is true, there is an understudy of the principal actor or singer; but at times none is provided by the management. It is astonishing to what extent actors will attempt to play when thus suffering, and the demands made upon the throat in parts which call for unusual effort increase the ordinary inflammation, tire the vocal muscles and tend to exhaust and fatigue the actor; this means a slower recovery and undoubtedly damages the voice if continued for any length of time.

The effort of acting, especially in emotional parts, often produces a profuse perspiration, and in the dressing-rooms many opportunities exist for the sudden chilling of the body-surface and an increase of the throat malady. When through diminished power of general resistance an individual "catches cold," being exposed to a raw damp, cold atmosphere; over-uses the voice in speaking, singing or shouting, particularly under unfavorable atmospheric conditions, as in crowded, badly ventilated halls or in the open air, a catarrhal condition of the upper air-passages ensues with, at times, an acute laryngitis of part of the tract involved. Epidemics of influenza are apt to give rise to a laryngitis of greater intensity, and

*Presented at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

one that resists treatment considerably, because the very nature of influenza is to remain dormant and then to crop up when least expected. During the last two years every medical man has been impressed with this tendency to recurrence.

As the symptoms of acute laryngitis are so well known I must apologize for taking up your time with mentioning some of them, the most important ones, and merely sufficient to emphasize the treatment. There is a sensation of dryness and tickling in the throat; inspiration of cold air and talking may cause pain. Cough is a prominent symptom; it is tickling and hoarse or laryngeal in its character; at first dry, later attended with scanty muco-purulent expectoration, which in severe cases may be slightly streaked with blood. The voice, at first husky, grows rapidly hoarse and at length may be completely lost. If the attack is of a severe type, the cough is very harrassing, deglutition is painful and there may be even urgent dyspnœa. Laryngoscopic examination shows that the mucosa is reddened and swollen, especially between the arytenoid cartilage and in the ary-epiglottic folds. When the inflammation is intense the vocal cords present superficial erosions, and minute hemorrhages are seen at various points of the laryngeal mucous membrane. A scanty exudation of altered mucus is irregularly scattered upon the surface. In phonation there may be observed imperfect approximation of the vocal cords, due to implication of the intrinsic muscles of the larynx in the inflammatory process. Constitutional symptoms vary; they are not usually severe. Moderate fever, with headache and loss of appetite may occur. The attack lasts from a few days to a week or more, depending largely upon the amount of rest which can be given the throat and the character of the treatment.

When an actor, singer or public speaker presents himself to us for the relief of hoarseness or loss of voice, partial or complete, we have some problems to solve at once. Where rest of the voice is possible, as in the instance of an understudy taking the part, the most important thing is to insist upon this rest, unless the symptoms are mild and playing with caution would not increase the trouble. If any nasal symptoms exist the entire nasal membrane should be painted with a 20% solution of argyrol, and the post-nasal space, with the pharynx, similarly treated. Then a solution composed of iodine crystals, 8 grains, iodid of potassium, 38 grains, and glycerin, 5viss, should be applied with a camel's hair brush to the vocal cords, true and false. With the tongue well drawn out of

the mouth in the usual way, the curved laryngeal brush with the iodine solution is introduced quickly into the space just over the open glottis during the act of inspiration, and on expiration the patient is requested to produce a fairly high tone during which the cords are painted, and then on withdrawal of the brush the false cords receive the application; it requires only a few seconds. Care must be taken to remove any excess of the solution from the brush before treatment, as otherwise an alarming spasm of the glottis may occur; above all things the painting must not be made during inspiration, as in this way all air will be shut off and the patient become distressed and frightened.

A few minutes after the laryngeal part of the treatment is finished, it is a good plan to follow up with a compressed air vapor-inhalation of the Battle Creek Sanatorium formula known as their "Inhalant No. 8;" this is very fragrant and soothing to the naso-bronchial mucous membrane. It is inhaled through the nose and exhaled from the mouth, deep inspirations being employed. If the laryngeal muscles as well as the muscles of the neck are involved, as indicated by stiffness on swallowing and speaking, inunctions of "K Y Jelly" are made, with massage of the finger tips to the region of the larynx and the adjoining parts of the throat; this improves the circulation in the part; and finally the high-frequency current electrode is applied to the affected areas, on the cutaneous surface—for five minutes, and in this way assists in the absorption of the inflammatory products.

As regards the internal medication, it affords me much pleasure to say that the sheet anchor in these cases is phosphorus. Many failures have been experienced with this remedy because of carelessness in its preparation, and in the way in which it is kept in the pharmacy and in the private laboratory. It is undoubtedly a fact that no good, reliable preparation of phosphorus can be obtained unless a piece of the yellow phosphorus is *always* kept in the bottle with absolute alcohol; if it disappears, replace it promptly and your tincture will be dependable. This yields an odor similar to that of "matches." If this precaution is not taken, the solution—however good when furnished the physician—deteriorates after a time, with the formation of hypophosphorus acid and loss of activity as a curative agent. No medical man, therefore, or any druggist should keep in his laboratory or office a solution of phosphorus unless there is a bit of the metal in it always. Many a case of pneumonia in the consolidation stage may have been lost because the indicated

remedy, phosphorus, was not active. In dispensing the remedy to a patient it is convenient to put, say, three drops in a three dram vial, add a finger's breadth of alcohol and fill up with blank tablets or disks. Shake well and give two tablets every two hours until better, then less often.

If strain of the voice with great soreness is marked, a single dose of arnica—a few drops of the 3x dilution in a spoonful of water—will materially assist in the rapid recovery. When pronounced muscular stiffness is present, with pain on swallowing, *phytolacca decandra*, prepared from the fresh plant tincture and administered in the same way as phosphorus, will not only relieve the cervical muscles but also the intrinsic ones of the larynx. When it is necessary to obtain very quick results, a steam inhalation from a benzoinol inhaler, with a teaspoonful of the compound tincture of benzoin in the inhaler half filled with boiling water, may be used night and morning. If the benzoin is too drying to the throat, use plain steam instead as an inhalation. Should there be symptoms of coryza, *Mercurius jod. cum.*, *Kali jod. 3x trit.*, a tablet every hour, will do excellent work in clearing up the nasal passages, in fact, this must always be our first consideration, as without clearness in that region the voice will encounter increased work in tone production, especially, of course, the head tones. Occasionally one finds that a sensation of stuffiness near the root of the nose gives trouble, with or without any discharge, and for this *Sticta pulmonalis* is almost specific—3x dilution on disks.

It goes without saying that the digestion must be watched, as actors and singers like other people are not always careful either to eat proper food or to take their meals at regular hours.

In closing this informal paper I must allude to the psychological element in treating stage folk. Their world exists chiefly in the theatre behind the footlights, and they expect you as their physician to see the play; to comment upon its strong points, favorably if you can; they place themselves in your hands under a sort of time-limit and a handicap, as you are expected to keep them going and to improve the voice at the same time that the use of it tends to retard recovery. On one occasion, when the writer was becoming enthusiastic over the rapid improvement of a dramatic star's voice and asked the actor if he were not pleased with his progress, the actor looked up coldly and said, "What as I coming

here for?" This is the usual attitude of singer and actor, with the ever-present thought that quick results should be obtained. However, as a class they are appreciative of anything that is done for them, and particularly so when any real interest in them or their art is shown; they deserve our sympathy for the stage life is a hard one.

The case rate mortality in diphtheria has remained at nearly the same level since the introduction of antitoxin, and the decline in mortality has been much smaller than we would have expected. Some of the states still have no better records than the loss of seventeen, twenty-one and twenty-three per cent. of the reported cases. The incidence and mortality run particularly high in the large cities: 1916, Philadelphia, 22.8; New York City, 18.5; Chicago, 31.5, and Boston, 24.6 per cent.—H. L. Hall, *Penna. Dept. of Health*.

D. M.

Extract from Letter—Dr. L. E. Hetrick to the Editor.—The New York Ophthalmic Hospital will be prepared to hold a clinic on Tuesday afternoon, October 19, 1920. I have scheduled already two Smith-Fisher cataract operations by Dr. Lloyd. Dr. Hallett has promised to get up something from his clinic, and it is my hope to be able to furnish a radical mastoid. There will also be demonstrated in the clinic interesting intraocular conditions. At the Metropolitan Hospital, also under homœopathic control, I will be in charge of the eye and ear clinic on Tuesdsay morning from eight until ten o'clock.

CATARACTS OF THE SOFT OR JUVENILE VARIETY OPERATED BY THE DOWLING METHOD.*

DEWAYNE HALLETT, M. D.,

New York.

BEFORE a meeting of this Society in 1919 a paper was presented by J. Ivimey Dowling describing a new operation for soft cataracts which so appealed to me that I have since then performed it on four patients.

Following his technique the pupil was fully dilated with homatropin and the patient placed under general anæsthesia. Using speculum and fixation forceps, a Graefe knife traversed the anterior chamber at the sclerocorneal margin from a point two millimeters below the meridian at the outer to two millimeters above at the nasal side, and cutting upward to make a wide incision on the temporal and a lesser one on the nasal side, but finally leaving a broad uncut bridge of cornea above.

The second step was an extensive vertical capsulotomy from and to a point under the iris.

In the third step the fixation forceps are removed and a grooved spatula introduced through the lips of the nasal wound. Through the temporal incision the straight tip of a syringe is introduced, carried through the opening in the capsule, projected downward beneath the iris and gentle but firm syringing employed with sufficient force to break up the lens substance and wash it from beneath the angle of the iris. The syringe tip is shifted to several positions above, below and to the sides, evacuating all lens substances from under the iris edge throughout its circumference until the pupil is black. The syringe may be refilled several times.

My solution was of normal salt, diluted one-half.

The particles of lens substance escape through both incisions, the larger ones along the side of the syringe tip and smaller ones where the spatula holds open the nasal wound.

*Presented at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

When completed the pupil is black, and should the iris have prolapsed it is repositioned.

Finally a miotic is instilled and a dressing applied.

After from twelve to twenty-four hours atropin is used.

My first case was interesting.

A boy, O. S., seven years of age, was brought to the clinic from Florida about three weeks prior to the beginning of a summer vacation. The cataracts were complete in each eye, the child having to be led about, and the mother anxious to get back home. I did not wish to operate by the usual needling program and leave to summer assistants the possible complications; in fact, I did not wish to operate till September, even though the patient's needs excited my sympathy, till Dr. Dowling's procedure occurred to my mind, and I followed it on each eye with an interval of thirteen days.

The results were astonishingly satisfactory; no iritis, pupils black, round, and when atropin was discontinued, active.

The boy went home with lenses prescribed by the skiascopic method, and in April of this year had 20/30 vision.

The third eye to which this method was applied was that of a four-year-old boy, D. H., with a traumatic cataract due to a penetrating wound received the same day. The iris was prolapsed and severely lacerated. Probably the ciliary body was similarly injured since there was blood in the vitreous chamber.

A moderate infective reaction subsided in about four days, leaving a good cosmetic result with vision equal to identifying a watch or a coin, with indication of better results from an iridectomy yet to be made. Without lens removal this eye would probably have required enucleation. Irrigation and the bridge of uncut cornea were essential factors in the good results.

The fourth case was that of a boy, F. C., eleven years of age, with a traumatic cataract of a year's standing. In this case toward the latter part of the operation the posterior capsule was ruptured, permitting vitreous to escape, and, therefore, some lens substance remained in the eye. A sharp iritis developed followed by an iritic adhesion with the corneal wound on the temporal side and a moderate amount of vitreous opacities. However, the pupil is nearly round. This patient has failed to return for a test of vision.

CATARACTS OF THE SOFT OR JUVENILE VARIETY.

It seems to me that a serious defect in technique as applied to this case was the inadvertent introduction of the syringe tip in such manner as to lacerate the posterior capsule, since the return flow under these circumstances exerts itself largely in the vitreous chamber and fails to wash out the lens substance as otherwise it would.

There is perhaps some question as to the most appropriate syringe. The one used on the first three cases was an Agnew lachrymal, and on the fourth case a rubber bulb about an inch-and-a-half in diameter with a glass tip tapering down to a narrow flattened orifice, and designated an anterior chamber syringe by G. Tiemann, instrument makers.

274 West 86th Street.

Syphilis and Cancer.—Wiggers reports an interesting series of cases of cancer with syphilis complicating. The following case is quoted:

"Mr. H. R., age 37, had been sent to me by a nose and throat specialist, with a very marked swelling of the superior maxillary, on the left side. The mass was bulging down into the mouth, almost ulcerated through. Very foul discharge from the nose. The man denied any syphilitic history. The pathological examination of the specimen showed a round-celled sarcoma. Radium was applied over night, at intervals of one week, in the left nostril. The third application was on the right side. After the third treatment the condition remained stationary. Just prior to the first treatment another nose and throat specialist was consulted. All agreed that it was a case of sarcoma. When he reached the quiescent state a third nose and throat specialist was consulted and he insisted upon the Wassermann test being made, in spite of the fact that the patient denied any syphilitic history. A four plus Wassermann was found and after injections of salvarsan the entire condition disappeared."—*J. Amer. Inst. Hom.*, Aug., 1920.

D. M.

EPIPHORA.*

S. B. MOON, M. D.,

Pittsburgh, Pa.

MANY etiological factors have to be considered in statements of the tear drainage tract, because of its complicated physiological mechanism, its irregular course and its close relationship to neighboring structures.

This drainage tract functions much like a sewer, for it constantly conducts tears and foreign matter to the nasal cavity. It has a collecting reservoir (the lachrymal sac) and sewer traps in the nasal duct, due to the folds of the mucous membrane that lines it. The sac and pockets favor the lodgment and long retention of foreign matter, which excites irritation, inflammation and thickening of the membrane, eventually resulting in adhesions and stenosis.

The purpose of the lachrymal sac is to suck in the tears from the conjunctival sac by the way of the canaliculi and puncti. This is accomplished by muscular action during the act of winking. The length of the nasal duct with its mucous membrane folds, underlined with a venous plexus, is to prevent nasal fluids from entering the lachrymal sac. For instance, when blowing the nose the veins of the face dilate; therefore the venous plexus increases its size, causing the nasal duct to collapse to a great extent; the mucous folds are brought together and thereby temporarily close the canal. (Epiphora in acute rhinitis may be partly accounted for in this way.)

The earliest symptom of obstruction of the tear drainage tract is epiphora, and this differs from lachrymation in the fact that the latter is due to the hypersecretion of tears and not to any obstruction in the drainage canal. A simple test is made by instilling fluorescin or argyrol solution into the conjunctival sac, having the patient wink several times, and blow the nose; then examine for the discoloration, noting the time required to enter the nasal cavity. Two or three minutes is about the normal time. When in doubt this test will differentiate lachrymation from epiphora.

*Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

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To locate an obstruction of the drainage tract an inspection of the punctum will determine its size, and if need be it can be dilated for the introduction of a No. 1 Bowman's probe, which is passed through the canaliculus sac and nasal duct until it meets with resistance. If the obstruction is near the nasal orifice a careful examination of the nose should be made to determine the position of the lower turbinate—whether it is too close to the outer nasal wall or hypertrophied; and also for other nasal obstructions. In dachryocystitis we have ectasia of the lachrymal sac. Pressure over this area will expel its contents into the conjunctival sac or the nasal cavity.

The neighboring structures that may cause epiphora are the eyelids, the conjunctiva, the nose and accessory cavities, the lachrymal, nasal and maxillary bones, the nerve and blood supply. All these tissues may be affected by constitutional diseases, such as syphilis, tuberculosis and sepsis.

In the tract itself we may have a contracted or misplaced punctum, atresia, obliteration, foreign bodies (cilia or calculus), mucocoele, leptothrix, actinomycosis and polypus of the canaliculi. Dachryocystitis, acute or chronic, may come from microbic organisms, atresia, foreign bodies, and polypus of the nasal duct, or malignant growths anywhere in the tract.

In partial obstruction of the tear tract irrigations may be tried out. A small per cent., however, are amenable to this treatment. Saline solutions are used unless the prevailing micro-organisms can be identified, in which case the choice of a solution depends on the type of infection. The solutions in use are zinc for diplobacillus, optochin for pneumococci, bichloride for streptococcus and staphylococcus, and saline for Koch-Weeks and other catarrhal micro-organisms.

Contracted punctums require surgical attention; dilatation may suffice, if not, then slitting the canaliculus two or three millimeters and removing a triangular piece of conjunctival tissue (base up), including the inner lip of the wound may be done. Dilatation of strictures of the canaliculus or, in intractable cases, slitting the canal to the lachrymal sac is permissible; incisions for foreign bodies in the canaliculus; irrigations for chronic dachryocystitis, cutaneous incisions and iodoform gauze drainage for acute dachryocystitis, and the surgical use of Bowman's probe in perforating an incomplete nasal orifice in the nasal duct of the newborn. Otherwise, the therapeutic use of probes has been a complete failure in my experience. Just here I might also condemn the use of styles,

for while in use and kept clean they give fair results, a short time after their removal the trouble returns.

In chronic suppurative dacryocystitis with complete obstruction of the nasal duct, radical operations are usually necessary for a cure, either by destroying the sac or establishing a free nasal communication for drainage. There are three methods in vogue for the destruction of the lachrymal sac. First, by cauterizing with trichloroacetic acid; second, by slitting the canaliculus to the sac and thorough curettement of the sac after the method of Dr. Kearney, of New York; and third, the dissection of the sac by the cutaneous route. Personally, I prefer the curettement method, and have had the best results with it, provided there is no ethmoid trouble that might be communicated to the sac. In the aged this method has been followed by slight epiphora only; in the young the secretions are more active and epiphora is very annoying even when the lower lobe of the lachrymal gland has been removed. In these younger patients a nasolachrymal communication would be ideal if it were not for nature's efforts to reproduce the lost bone tissue, which in time closes up the communication. The operations of Toti and Yankauer do this, and—like sinus cases—there is always a patient to be kept under observation and the openings maintained by occasional surgical interference.

The operation of Drs. Benedict and Barlow, of Rochester, Minnesota, consisting of making a one-centimeter-diameter opening at the anterior end of the middle turbinate into the lachrymal sac, would be the most favorable in maintaining permanent drainage. This operation should not be done when the canaliculi have been slit, for upon blowing the nose fluids would enter the conjunctival sac and set up acute inflammation. Personally, I have had no experience in radical curettement of the nasal duct with the idea of a new mucous membrane formation, for I look upon it as a method that would be followed by obstruction and dense adhesions, similar to what occurs in other structures following injuries.

I am reporting a series of cases that show my failures rather than my successes, for it is our failures that stimulate us to devise new methods of treatment. One thing is certain—any routine treatment is not going to meet with much success, and it requires much thought and careful diagnosis to cope with this class of cases.

In 117 cases 79 were due to obstruction without suppuration of the lachrymal sac, and 38 cases were complicated by a catarrhal or suppurative inflammation of the sac. Among the 79 cases 19 were cured

EPIPHORA.

by the following measures; 2 by dilatation of the punctum, 5 by saline irrigations, 3 by saline irrigations and nasal operations, 5 by conjunctival instillations of argyrol, 10% sol., 3 by slitting canaliculus and argyrol instillations, 1 by correcting eczema of the face and lids. Ten cases were not treated, two of which were due to Bell's paralysis. Another had chronic suppurative dachryocystitis for several years—recovering without treatment. However, the epiphora was not relieved. Forty-eight cases discontinued treatment for various reasons.

In the 38 cases of dachryocystitis 10 were acute, 3 had spontaneously ruptured and were treated by iodoform gauze drainage, resulting in a cure of two cases. The other case did not continue treatment; 5 cases were treated by punctum and canaliculi irrigation, 2 were cured, 2 not cured, one case results unknown; 2 were treated by slitting lower canaliculi, 1 being cured and in the other results are unknown.

Twenty-six cases of chronic suppurative dachryocystitis,—6 of them treated by radical operations, extirpation of the tear sac (2 cases), and 4 cases were curetted after the method of Dr. Kearney—all resulting in cures so far as relieving the suppurative discharges. Two cases were luetic and responded to internal mercurial administration. Eighteen cases were treated by irrigation without improvement. Two cases of chronic catarrhal dachryocystitis or mucocele were treated by irrigations—results, one cured and one not benefited. This series of cases resulted as follows: thirty-five per cent. of recoveries in cases of dachryocystitis, and in epiphora twenty-five per cent. On this percentage basis I am including the cases that gave up treatment largely on account of fear of operative measures—and for various other reasons. It has been difficult to secure co-operation of patients suffering from epiphora for to them the trouble does not seem serious enough to warrant operation, so they drift along until a suppurative dachryocystitis develops. I find that many of these patients have not been told of the evil results of neglecting epiphora, yet they have often sought medical advice. I feel we should never get too busy to notify our patients of the seriousness of this apparently innocent condition.

AN ACCIDENT—TEAR OF THE RETINA.*

C. GURNEE FELLOWS, M. D.,

Chicago, Ill.

I WISH to relate an unusual case, interesting to me and it may be to you as well. If it brings out a little discussion with the report of similar cases from others, I shall be glad to know about them.

A young college student, while running, was hit by a baseball which had just been batted and bounding once, hit him in the left eye, squarely in front. The lid was slightly torn, the pain and apparent blindness so immediate that he was rushed to the athletic medical attendant, who at once took stitches in the lid and told him that the eye would recover its sight. When the sight did not return the patient waited three months before becoming worried, at which time he consulted me. The examination revealed a slightly scarred healed eyelid, with no external deformity of the eyeball, with vision reduced to 3/100, and even this very little sight could be had only by turning his head in very marked fashion to one side and hunting for the best and only spot by which he could obtain this reduced vision.

The right eye was normal, 20/20 and Yeager 1.

With the dilated pupil, a fundus examination showed a distinct tear in the retina, so that apparently we were looking through upon the sclera. The retina and the choroid immediately surrounding the tear showed nothing unusual and no sign of commencing atrophy was visible. The eye, as you see, was practically blind, the prognosis was grave, and no treatment advised. While the pupil was still dilated I asked for corroborative evidence by the way of diagnosis and prognosis, allowing the parents to select their own oculist for this purpose. The consulting physician agreed with me entirely, and we therefore considered the case ended.

REMARKS.—I am constantly exasperated with some member of the medical profession who will treat such a serious case in so cursory a manner. Why a general practitioner, in the presence of a blindness, should

*Presented at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

not immediately find out what the cause of it is and what is to be done I cannot comprehend.

To be content to sew up an eyelid and not investigate a blind eye behind it, or even suggest that a patient consult an ophthalmologist, is certainly reprehensible; of course, we might not have been able to do anything in the first place, but we could at least have had the satisfaction of knowing that nothing had been neglected, instead of having the boy's parents feel, as they do now, that three months' time had been lost which might have been valuable in restoring the sight. This lack of advice reminds us of the days when the doctors said to wait until a cross-eyed child grew up before sending him to an oculist for an examination, or to wait a few years for a discharging ear to be cured somehow or other. Both of these are out of date.

The interesting thing about the case related is that nearly a year later, the patient, according to instructions, returned for a re-examination, and to my extreme surprise, with a vision of 20/100 and 10/40, very nearly central vision.

There is a spot which has a peculiar appearance at the seat of the original tear, practically including the yellow spot, but it does not present the appearance of the sclera showing through, nor of complete atrophy, which one would expect to find; on the contrary, there seems to be an increased circulation, and whether the yellow spot was sufficiently uninjured to be still functioning or a new yellow spot is being developed, I am unable to state. Time may help us to decide.

I shall see the case at intervals, watching for what nature can accomplish, because no treatment whatever has been followed. With the improved condition I am now asking the young man to use it daily for a short period, in order to see what exercise will do, the other eye being covered at the time, of course.

CAROTID ANEURISMS PRODUCING EAR NOISES.*

DOUGLAS MACFARLAN, M. D.,

Philadelphia, Pa.

IT is impossible for me to say at this moment that somewhere in medical literature there are not reports of cases of carotid aneurisms producing ear noises; however, this is of little moment, as the condition is sufficiently rare to be classed among the curiosities. I present two cases, not so much on account of their rarity as for the purpose of illustrating two facts; namely,—that the physician should be always on the lookout for the rare and peculiar, and that he should not disregard without investigation even extreme statements made by patients.

CASE 1.—Madame Hanot, age 58, complained of what she called in French a “siffle” or whistling in her right ear. P. M. H.—Diabetes mellitus in March, 1914, and several attacks since.

PHYSICAL EXAMINATION: Robust woman in apparent good health; does her own housework without physical distress, but merely complains of noise in right ear which keeps her awake; has occasional dizziness. Cardiac area nn; no adventitious sounds; force and rate good, except for an occasional extra systole every 50 or 60 beats. No evidence of cardiac failure. Right common carotid pulse smaller than left; right radial pulse also smaller than left. Appetite fair, occasionally upset; no vomiting, no severe headaches; occasional dizziness after bending over or after a heavy meal.

No deafness—hearing acute; left better than right; drums sclerotic; canals normal. On listening with the ear or with the stethoscope to the right ear a distinct puff can be heard that is synchronous with the pulse. She says this noise started two years ago—then scarcely noticeable; she thought it was the “bec soufflant,” a whistling in the nose. She had been to an aurist some years before, who said that she had no bone conduction on the left side. This must have been a mistake as now both air and bone conduction are normal on the left side.

No symptoms referable to impairment of any of the cranial nerves;

*Presented at the Annual Meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

CAROTID ANEURISMS PRODUCING EAR NOISES.

no symptoms of intra-cranial trouble. Argyll-Robertson pupil negative. No miscarriages.

No neck pulsation; no tracheal symptoms; chest palpation negative.

CONCLUSIONS: I cannot account for the inequality of the pulse, and should have further evidence to support a diagnosis of thoracic aneurism. As there was no neck pulsation the location of the aneurism was apparently not in the common carotid nor in its branches in the neck. It seems probable that the location was in the internal carotid at or near the foramen. The contiguity of the petrous portion would readily account for the transmission of the sound by bone conduction to the patient's hearing, although I cannot understand how either the sound or the conduction could be sufficiently strong to permit the sound being heard so distinctly by the examiner.

CASE 2.—Mrs. C., widow, age 62. In January, 1920, she had symptoms of mild nervous breakdown, a sensitive stomach, nausea, vomiting, neuritic and neuralgic pains. No circulatory symptoms; urinalysis negative; slight frequency; no dyspnœa; heart area normal; force and rate good; vessels soft; blood-pressure 135-80. She complains of weakness of the limbs and unsteady step.

Two months later she was better as to the nerves and stomach trouble; the weakness in the knees was as bad, and she had ear noises, slight vertigo at times and an acute coryza.

March 17, 1920.—Vertigo improved; ear noises worse—keep her awake at night; yawning; sleepiness; sneezing; strength fair; coryza nearly well. Gait and stance normal; reflexes normal; no nystagmus. No change in her ears or hearing, but the noise is puzzling.

May 8, 1920.—Continued treatment for ear noises unsuccessful. Eustachian tubes open; no apparent catarrhal condition. The noises were getting progressively worse and she got little sleep. She said the noises were "blowing" and were the same time as the pulse. For the first time I noticed a slight pulsation in front of the left sterno-cleido-mastoid muscle. Listening over this with a stethoscope I could hear a distinct bruit, transmitted best upward and disappearing on going downward. There was nothing on the right. The heart was again gone over carefully and nothing of import was noted. Listening with the stethoscope in front of the external auditory meatus the bruit could be distinctly heard.

To my mind I had run across another case of aneurism, this time

possibly of the last part of the common carotid or the beginning of the internal carotid. The transmission and the explanation of the ear noise is to me the same as in the first case.

Unfortunately I can find nothing nor can I conceive of anything in the way of treatment.

1805 Chestnut Street.

Farr, *Penna. Med. Jour.*, August, 1920, gives an exhaustive summary of the literature of **Heart Conditions in Diphtheria**. As to prognosis, he has found, (1) Sinus arhythmia is of no pathological significance as regards the heart, since its causes are a disturbance of the vagus or sympathetic tone. (2) Extrasystolic arhythmia likewise is not distinctly pathological in children. (3) Heart block, shown by fall in the pulse rate, is a grave complication, and is an evidence of a disturbance of the muscular bundle of His. Most of the reported deaths from heart complications following diphtheria are from this cause. "It should be suspected if the pulse becomes very slow (30 or 40), and particularly if the fall is abrupt." (4) Auricular fibrillation is infrequently found in diphtheria; it may be found with heart-block, and is significant of a chronic endocarditis, with myocardial weakness and exhaustion. In diphtheria it may be due to a temporary toxic injury to the myocardium.

The case histories reported are full and interesting.

D. M.

Journal of Ophthalmology Otology and Laryngology

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Editorial

CHRONIC MIDDLE EAR SUPPURATION—ITS CAUSE AND CURE.

(Continued.)

THE cause of chronic middle ear suppuration is apparently the same as that of the average acute form, plus something else, for the reason that the large majority of acute middle ear suppurations tend to clear up spontaneously in spite of neglect. Since the large majority of acute middle ear suppurations tend to clear up spontaneously, it follows that one or more of the factors of the combination that brought about the acute suppuration originally must have abated sufficiently in this favorable class to have allowed nature to restore to normal, or relatively normal, the inflamed tissues. On the other hand, in the smaller class of acute suppurations which progress to the chronic stage, the human organism was unable for one reason or another to react favorably enough against one or more of the etiologic factors to break up the vicious combination that produced the acute middle ear suppuration originally, or else secondary factors must have arisen as a complication to hinder nature in her attempts at a cure, which under ordinary circumstances she is able to effect.

If the causes of acute middle ear suppuration can be accurately determined, then we may be able to anticipate and correct them early enough to prevent the occurrence of the first attack of the disease. This then would seem to be the first step in the solution of the problem of cause and cure of chronic middle ear suppuration.

It was pointed out in a previous editorial on this subject that knowledge of many things is necessary for the purpose, the truth of which will unfold itself in a further discussion of the subject. We have come to a

knowledge of the fact that enlarged adenoids predispose to middle ear inflammation, because in the vast majority of cases of acute middle ear suppuration the presence of enlarged adenoids is revealed in the nasopharynx: furthermore, the removal of the adenoids in these same patients is followed by a complete cessation of ear troubles, in most instances. This is the experience of all those who have given the subject careful study, so much so that practically every otologist has become an enthusiast to the extent that there is a tendency to ignore other factors. That the presence of enlarged and therefore diseased adenoids predisposes to tubotympanic inflammation cannot be denied. On the other hand, there exist quite a few children with enlarged adenoids who apparently do not suffer from middle ear inflammation, at least so far as we are able to determine. Allowance should be made for the lack of skill of the physician examining the case. Besides, occasionally middle ear inflammation occurs in individuals whose nasopharynx reveals practically no enlargement of the adenoids. Again allowance should be made for lack of skill on the part of the examiner in recognizing them.

Most of us can recall instances in which one examiner tells the parents of a child that it has enlarged adenoids; another examiner later denies it; a third examiner is in doubt. This opens up the question as to why do three examiners of equally good repute report three different findings?—something which is calculated to bring the criticism of bad judgment on at least two of the examiners, if not ill repute upon the whole medical profession in the mind of the parent, the more so if he happens to be an overly exacting individual.

Can all three opinions be right? Can all three be wrong? If one is right must the other two be wrong? If two are right must the third be wrong? Upon the correct answer to these questions depends a good deal as to the child's future prospects, for no one cares to operate when operation is unnecessary nor to neglect to operate when it is necessary.

The first question arising is, can all three be right? Yes, but only partially so. The same patient may be seen by three examiners at different times, and three different opinions may be rendered. Furthermore, the one examiner seeing the same case at different times may have good reasons in accordance with the findings each time, for rendering varying opinions. This is equivalent to admitting that it sometimes happens that a patient with enlarged adenoids shows varying degrees of enlargement of the adenoids at different times. For instance, a child brought in to-day

with an acute rhinopharyngitis evidences in the naso-pharynx a large, rather pink-colored succulent adenoid, which prompts the examiner to tell the parent that its presence is a menace to the health of the child generally and makes it especially susceptible to middle ear trouble, and therefore advises its removal. A few weeks later the father, who may be disinclined towards surgery, takes the child to another examiner without advising him as to a previous opinion. This second examiner studies the case just as carefully as the first, and finding a relatively small adenoid so acquaints the father, and advises watchful waiting. The father is plunged into a feeling of doubt, and proceeds forthwith to a third examiner, who studies the case quite as carefully as the previous ones, and if he happens to be a cautious man manifests to the parent a feeling of doubt. If he is an exceptionally careful examiner and a broad-minded one, after the parent acquaints him with the contradictory opinions of the earlier examiners he may explain to the father the exact conditions as they frequently are in this class of cases; namely, that many a small, rather insignificant-looking adenoid may enlarge to several times its size during an acute rhinopharyngitis, when it may also lead to middle ear complications. Therefore, on account of this menace it would be safer to remove the adenoid, and preferably at a time when it shows the least amount of swelling.

A knowledge of the anatomy of the nasopharynx, the pathology of inflammation, besides other things, were necessary prerequisites before the third examiner could have formed a correct mental picture of just how large the adenoid was when not inflamed. One must also know the location of greatest dimension of the adenoid, especially with reference to the fossa of Rosenmüller, the size of the normal nasopharynx in children of different ages, how much if any the dimensions of the nasopharynx of the particular child in question vary from the normal, and just how much enlargement is permissible in the event of an acute inflammation before the mouth of the Eustachian tube will be encroached upon and proper ventilation of the tube and middle ear impaired, with resulting negative pressure and inflammation of tube and middle ear cavity.

To summarize: Enlarged and diseased adenoid is unquestionably a very important predisposing factor in the causation of middle ear disease in the majority of cases occurring in early life and in a smaller number of cases in later life. It is not the only predisposing factor for reasons already stated. Obstructive disease of the nose of any character predisposes to middle ear disease, ample evidence of which has been witnessed

time and again by experienced otologists. The first thought of the otologist in a case of middle ear suppuration of recent origin is that there must be some obstruction in the patient's nose or nasopharynx. He looks for it, finds it, removes it, and the ear condition improves in the vast majority of cases of recent origin, and in a few of the more latent or chronic cases. The more common form of nasal obstruction is deflection of the nasal septum. If the otologist finds after a wide experience that approximately 85 per cent. of his cases of unilateral middle ear disease show that the involvement of the middle ear corresponds to the side of the deflection, and if after its correction the majority of the cases show more or less improvement, he feels quite convinced that there must be some connection between the septal deflection and the middle ear disease.

The otologist occasionally finds a case of unilateral middle ear disease, let us say of the left side, and at the same time a deflection of the septum to the opposite side (right), in which event he frequently finds other forms of nasal obstruction on the side of the nose corresponding to the affected ear outweighing that produced by the deflection, which proves to him that in unilateral cases of middle ear disease the disease hits the side corresponding to that showing the greater degree of nasal obstruction. The natural conclusion is that nasal obstruction of any kind bears an etiologic relationship to middle ear disease, and since septal deflection is the most common cause of nasal obstruction it follows that it also is the most common intranasal predisposing cause of middle ear disease.

Though nasal or nasopharyngeal obstruction as a rule tends to produce middle ear troubles there are exceptions, as most of those with experience can attest; otherwise the prevention of middle ear disease could be guaranteed in every case by the removal of the obstructions; and we know of cases where every obstruction has been removed and yet the patient persists in having recurring ear troubles. Some otologists might object on the ground that in these cases where the obstructions are claimed to have been removed the judgment of the one making the claim is faulty. This might explain some failures but not all, so that we must look elsewhere.

Predispositions to middle ear disease may be found in the much abused so-called "run down condition of the system." That there is something about the physical condition of most of us that makes one susceptible to a peculiar disease and another immune there can be no doubt. There positively exist certain dyscrasias. One individual although quite free of tuberculosis may tend to develop lymphoid tissue more than the average.

EDITORIAL.

That these tendencies are inherited there can be no doubt, at least not in the minds of those who have given the most study to the subject of dyscrasias. That diabetes occurs in several members of the one family is not a mere coincidence. That in those who are merely beginning with diabetes is more susceptibility to pyogenic infection there can be no doubt. That other individuals of a certain build and complexion are more prone to develop tuberculosis is well known. That the children of syphilitics, no matter what the Wassermann may be, are more susceptible to deleterious influences of all kinds than those free of the taint of syphilis is also well known. So we might go on citing instances of dyscrasias and the part they play in contributing to the etiology of disease generally, influencing its form, that is, making it atypical, besides retarding recoveries; while those individuals who are relatively free of these dyscrasias react rapidly and favorably.

Previous dyscrasia undoubtedly plays a contributing part in middle ear as well as other forms of disease, and in the treatment of middle ear disease the particular dyscrasia at fault should be sought for in every case that does not yield promptly to ordinary conservative treatment.

Another etiologic factor of importance, according to the estimate of enthusiasts in their line, is susceptibility as measured by the relative destructive power of one's blood to the invasion of the tissues by particular forms of microorganisms. This covers the whole field of bacteriology plus something concerning which there is still considerable doubt. That vaccination against smallpox prevents smallpox there can be no doubt. So too with regard to vaccination against typhoid; but on the other hand that typhoid vaccine used after the present-day method will cure typhoid has not been proven. In other words, the use of specific vaccines for the treatment of specific diseases has not fulfilled the promises held out to us. Much might be said for and against vaccines if time permitted, but of this we are certain, it is not the long-sought cure-all that we have been hoping for.

An etiologic factor of even greater importance, and one too little considered by most of us, is that which we call vitality. How much the lack of vitality is tied up with unfavorable dyscrasias is a mooted question. Dyscrasias bear a relationship toward vitality in many instances but not all. Otherwise room is not left to consider other known factors. For instance, in the slum districts of large cities there exists a class of puny youngsters, with running ears, who when put out on the farm for a week

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or more pick up materially in weight and general appearance, including color in the cheeks; so that we must conclude that poor food, improper clothing, insufficient sunshine and fresh air play a very definite rôle in the etiology of middle ear disease, as well as of other ailments. It is lack of vitality that makes them susceptible to disease, and this lack of vitality is not altogether due to the well-known dyscrasias, for the majority of them do well under improved conditions. Granted for sake of argument that their lack of vitality is partly due to some dyscrasias, it is not wholly so, otherwise improvement in their surroundings could not effect such a wonderful improvement in their health.

G. W. M.

O., O. AND L. SOCIETY.

TREASURER'S REPORT.

1919-1920.

Receipts.

Balance on hand, June, 1919	\$483.74
Received from dues	655.00
Interest on deposit in R. I. Hospital Trust	2.30
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	\$1,141.04

Expenditures.

M. C. Repp, stenographer, on acc't	\$50.00
Ira O. Denman, expenses of President	29.90
Irons & Russell, silver buttons	94.50
American Homœopathic Institute Transactions	63.00
Wm. McLean, flowers for Dr. Norton's funeral	30.00
Balance to M. C. Repp, stenographer	50.00
Neil Bentley, expenses of Secretary	146.82
Wm. M. Muncy, expenses of Treasurer	21.27
University Press, Insurance on drug provings	7.50
Condor Writing Co., letters and blanks	10.30
Edward S. Jones Sons Co., printing	9.70
Albert Cross, expenses of Chairman Oph. Committee	5.40
O., O. and L. Journal, share of dues	357.00
Edward S. Jones Sons Co., printing	14.00
	<hr/>
	\$889.39
Balance in R. I. Hospital Trust	251.65
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	\$1,141.04

Assets.

Cash on hand	\$251.65
Dues in arrears	935.00
	<hr/>
	\$1,186.65

EDITORIAL.

Liabilities.

Expenses of President	\$ 25.00	
Expenses of Secretary	159.74	
Expenses of Treasurer	17.00	
Bill of Official stenog.	\$100.00	
Expenses of Bureau Chairman	20.00	321.74
Assets over liabilities		\$864.90
Number of members paid		116
" " " unpaid		90
Total membership		206
Number of deaths		2
Number of resignations		2

DEATHS.

Dr. A. B. Norton, New York City.

Dr. Walter E. Reily, Fulton, Mo.

RESIGNATIONS.

Dr. Elmer J. Bissell, Rochester, N. Y.

Dr. Byron G. Clark, New York City.

APPLIED FOR MEMBERSHIP.

Dr. Harvey R. Wynn, Ann Arbor, Mich.

Dr. Dudley A. Williams, Providence, R. I.

Respectfully submitted,

WM. M. MUNCY.

NEWLY ELECTED MEMBERS OF THE O., O. AND L. SOCIETY.

ANNUAL MEETING, JUNE, 1920.

Cattley, Stephen J.	542 Fifth Ave., New York, N. Y.
Chambers, Arthur L.	327 West 56th St., New York, N. Y.
Collins, Paul A.	120 Spring St., Trenton, N. J.
Evans, Russell M.	8001 Jenkins Arcade, Pittsburgh, Pa.
Furlong, Richard R.	297 Alexander Ave., New York, N. Y.
Grabin, C. S.	Spencer, Ia.
Greene, Albert W.	1156 Madison Ave., Albany, N. Y.
Grogan, Harry M.	Albany, N. Y.
Held, Wm. A.	West Unity, Ohio.
Miller, Theo. E.	25 East Washington St., Chicago, Ill.

EDITORIAL.

Moore, Harry E.	441	Merchant St., Ambridge, Pa.
Pater, Walter		Rentschler Bldg., Hamilton, Ohio.
Phelps, Haskell S.	114	West 13th St., New York, N. Y.
Shoemaker, John R.	207	No. Front St., Cuyahoga Falls, Ohio.
Thomas, Wm. Dulany	330	No. Charles St., Baltimore, Md.
Turtz, Chas. A.	403	West 57th St., New York, N. Y.
Walker, Waldo	79	College Ave., West Somerville, Mass.
Williams, Dudley A.	23	Waterman St., Providence, R. I.
Wynn, H. R.	220	So. Ingalls St., Ann Arbor, Mich.
Yost, Walter M.	215	So. Park Ave., Rochester, Pa.

THE AMERICAN JOURNAL OF OBSTETRICS AND GYNECOLOGY.

Above is the name of a new publication beginning in October, 1920, when its first number appeared. This publication will take the place of the *American Journal of Obstetrics and Diseases of Children*. The editorial board of the new Journal is composed of thirty-three physicians of the highest rating in their specialty. The Editor-in-chief is George W. Kosmak, M.D. The Journal is to be published monthly by C. V. Mosby Company, of St. Louis, Mo. The subscription price is \$6.00 per year. The first number contains 112 pages of scientific matter and abstracts.

G. W. M.

Then let us pray that come it nay,
As come it will for a' that,
That sense an' worth, o'er a' the earth,
Shall bear the gree, an' a' that.
For a' that, an' a' that,
It's comin' yet, for a' that—
The man to man, the warld o'er,
Shall brothers be for a' that.

Robert Burns.

STUDIES OF THE NORMAL AND PATHOLOGICAL MASTOID BY THE ROENTGEN RAY.*

WALTER C. BARKER, M. D.,

Philadelphia, Pa.

THE roentgenographic examination of the mastoid reveals all the information about it that may be desired. To acquire this coveted knowledge it is necessary to be able to correctly interpret the shadows upon the roentgenogram.

To improve his interpretation the roentgenologist must study for himself the cases, and follow up his reports by inquiring into the subsequent history of the patient, and in this way build up a knowledge which will make clear the conditions of the mastoid which the shadows represent.

Much labor has been spent in trying to formulate definite data upon which a positive or negative diagnosis may be made; but after all it is the study of the individual patient under observation that gives the most satisfactory results.

A diagnosis cannot be made from a roentgenogram of the mastoid unless the shadow is correctly projected upon the plate. It is also important to make stereoscopic plates in order to locate the position of necrosed cells. These may be near the surface or in the center of the mastoid or upon the wall of the sinus. This knowledge may not be so important to the operator because he will clean out all the cells if an operation is performed; a stereoscopic examination will, however, locate the position of diploic cells, and this may be of importance as they are sometimes covered with a shelf of bone, causing them to be missed in the operation.

A comparison of both mastoids is important, but it is known that all patients do not have the same type of mastoid on both sides; nevertheless, every means to a correct diagnosis should be adopted.

The lateral sinus is best studied by making the projection which will superimpose the internal meatus and the external meatus of the

*Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

auditory canal as nearly as possible. The bony walls forming the groove for the sinus are clearly shown, and the space between the sinus and the auditory canal may be measured with an error of only two or three millimeters. (Fig. 10.)

To study the cells it is better to spread them out by an oblique view. This is accomplished by rotating the head or shifting the tube so that the central ray will enter one inch behind and two inches above the tip of the opposite mastoid, and be directed toward the external auditory meatus on the same side as is the mastoid to be projected. (Figs. 11 and 8.)

A postero-anterior position gives a good comparison of the mastoids as to their relative size and density. The projection is made by placing the plate on an inclined plane, and then have the patient put the forehead upon the plate with the tip of the nose just clearing. The central ray is directed at an angle of twenty-three degrees above a line drawn through the external auditory meatus and the glabella. As the individual case is studied other special projections may be necessary.

Before attempting to interpret the pathological changes, the anatomical differences of the normal mastoid must be studied.

At birth the mastoid appears as two layers of bone separated by diploic cells, with a small cell in the center known as the antrum. This antrum is filled with air received from its communication with the middle ear, and is lined with mucous membrane. As the child grows and the muscles come into action and pull upon the mastoid process, it becomes enlarged. (Fig. 13.)

If the antrum does not increase in size and project new cells as the mastoid continues to grow, a mass type of mastoid will result. This mass type must not be confused with the pathological sclerotic type, which is the result of inflammatory changes. The mass type of mastoid may be relatively small in size, and the lateral sinus is usually forward so as to be near the auditory canal. This is a normal type of mastoid, and in Cheatle's classification is called an infantile type, of which he mentions two. (Fig. 9.)

If, as is usually the case during the development of the mastoid, the antrum distends into cellular projections throughout the mastoid, the pneumatic type is formed. This type may develop in several ways. The diploic cells may be pushed down to the tip. In this variety the shadow of the small cells with the increased density must not be confused

with that of fluid in the tip. They may be distinguished by the fine cellular wall formation. The diploic cells may remain behind and above the antrum, or may be pushed to any part of the margins of the mastoid, or they may be interspersed and become a part of the pneumatic cells. The pneumatic cells are not always confined to the mastoid process, but may extend posteriorly into the occipital bone, or above into the squamous portion of the temporal bone, or along the zygomatic arch, or even into the petrous portion of the temporal bone. Normal mastoids have been classified into a number of different types, but in studying the shadows as they appear in the roentgenogram less confusion may arise by dividing them into the two types known as the mass and the pneumatic, both of which have just been described. (Fig. 8 and Fig. 5-L.)

Shadows which represent pathological processes cannot be classified into definite groups. These shadows must be studied with due consideration of the variations of the shadows of the normal mastoid, and also by comparing them with those of the opposite side.

While a definite classification of the shadows of a pathological mastoid cannot be given, it is possible to state the significance of certain groups of shadows.

1. Cloudiness throughout the shadow of the mastoid on the affected side may be due to swelling of the soft parts covering the mastoid. If there is no swelling then it is due to an exudate within the cells, but without cell-wall destruction. (Fig. 1-R.)

2. Cloudiness with thickening of the cell walls may be due to congestion of the membrane. Such cases may have no pus, but upon cutting into the cells there will be excessive bleeding. (Fig. 2-L.)

3. Cloudiness with an increased density and destruction of the cell walls. Here there may be no pus but just a necrosis and breaking down of the cellular structure. (Fig. 3-L.)

4. Cloudiness with considerable increase of density, obliterating or blurring the cell walls, is usually due to pus. There may be areas of cell-wall destruction indicating necrosis but usually the cells are too much obliterated by the density of the shadow to determine these areas. (Fig. 4-L.)

5. A general density of the shadow of the mastoid without any evidence of cellular formation in a well developed mastoid, with the lateral sinus located well back, is usually due to sclerosis. This type is the result of prolonged inflammatory changes producing the dense ivory-

like bone formation. Sometimes areas of cells may be seen along the margin of this dense mastoid shadow, and if the walls of any of these cells coalesce it would be an indication of necrosis. (Fig. 5-R.)

These are the descriptions of the general groups of shadows indicating pathological processes. In reporting these findings it is of more value to give a description of the shadows than to give a direct diagnosis, such as "pus present" or "necrosis." If this description and the clinical signs are considered together a more accurate diagnosis will be made. If the roentgen ray examination supports the clinical findings it will add weight to the diagnosis. It sometimes happens that the clinical signs are vague, and the decision to operate depends upon the roentgen ray findings. In such cases the group shadows will aid in the decision.

If, for instance, there is a cloudiness through the cells and perhaps some thickening of the cell walls, but with these still intact, and there are no small areas of increased density in the mastoid shadow, operation may be delayed.

However, if there is only a slight increased cloudiness but the cell walls seem to coalesce and break down, operation is indicated because there is necrosis present.

When there are areas of increased density, or a marked general increase in the density with blurring of the cell walls, operation is indicated because pus is usually present.

To summarize the value of the roentgen findings in the study of the mastoid, it may be stated that they are misleading if direct diagnosis such as that of pus or necrosis is made; but they are of real value to the otologist if a description of the shadows, with their significance, is given of the particular case under observation.

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DISCUSSION. *

ROLLIN H. STEVENS, Detroit: Mr. Chairman and Members of the Society: I want to thank you very much for the honor and privilege of discussing this very interesting paper. Those slides are some of the finest and most instructive I have ever seen, and they certainly bring out the main points in normal and pathological conditions that are found in the mastoid. I don't think I can add anything to what has been brought out in the paper, nothing more than to emphasize some few points that the doctor has made.

I think the more I see of the roentgen ray diagnoses of mastoiditis the more conservative I grow about making a diagnosis. In fact, I leave the diagnosis almost entirely to the otologist and only describe the roentgen findings. Dr. Bentley is associated in our hospital and he invariably studies roentgen and clinical pictures together before making the diagnosis. And I think one should be very careful to take into consideration the history of the patient before making any diagnosis. I don't think any diagnosis should be made from the X-ray plate alone.

A German operator—I presume I can refer to German literature—

who has recently gotten out a book on this subject, which it has been my privilege to see, describes types of mastoid from childhood up, to show that old lesions, old congestions, inflammations and so on, that may have taken place in infancy, leave their scars throughout life; and so with an increased density and cloudiness of the plates, and unclear outlines, we cannot say that there is an acute or active lesion present any more than we can say—in examining the lungs, for instance, when we see old signs of tuberculosis—that there is an acute condition present there. So in mastoids, there may be some cloudiness of the cells and some irregularity that may have been due to lesions that perhaps have occurred way back in infancy, the scars of which remain; so that we must be very careful in making our diagnosis from X-ray findings.

Dr. Barker has brought out very clearly the distinction between the mass type mastoid and the sclerotic type; also shown that the diploic cells may be involved and none of the pneumatic cells—or very few of them. I don't think I can add anything further to the doctor's very excellent paper, and I was very glad indeed to have had the privilege of hearing it.

RALPH I. LLOYD, Brooklyn, N. Y.: It's hardly necessary to express my satisfaction with this paper. One of the things I might point out is that there is something else necessary for this kind of work than an X-ray machine and a lot of plates. The work must be done by someone who is not alone an X-ray operator. He must have some idea of this special line of work.

The suggestion of the use of the X-ray in chronic mastoid cases is something new to me, but it would seem to be exceedingly practical. It has been my misfortune that in cases where I most needed the X-ray I was unable to get it. Nowadays, with the development of the X-ray apparatus that can be carried around the house and connected with any electric light fixture, it may be possible to overcome that difficulty.

One other use that might be made of the X-ray is in connection with what looks to be furuncles in the external canal. Every now and then we have a case which appears to be single or multiple furuncles in the canal, but which later turns out to be something much more serious. In such a case I believe the X-ray would help us a great deal.

The trouble is that in the vicinity in which I live there is no X-ray operator who has taken a special interest in this work, and I can only

say again, it is not the X-ray machine alone, it is the matter of using it intelligently by one with special interest and training.

BURTON HASELTINE, Chicago, Ill.: It has been very gratifying to hear two sane X-ray men talk on this subject. So many times the X-ray is advanced to the position of a primary diagnostic measure, and a great many serious results follow.

There is one thing that is not usually thought of—especially in acute cases—that is helpful, and that is the taking of subsequent pictures of the same case. In chronic cases I cannot say they would be particularly beneficial, but in acute cases you can get a great deal of enlightenment by a series of X-ray pictures. No man can tell by taking a single picture just what the normal condition is. You might take one picture and get a certain finding, and a few days later take another picture and find an absolutely different condition.

E. L. HUNTER, Chicago, Ill.: It is not necessary to compliment the doctor on this excellent paper. As Dr. Haseltine said, the X-ray should not be depended on in the diagnosis of any desperate case, but as an aid in most cases the X-ray is valuable.

I have come to the conclusion that the X-ray has been developed so rapidly recently that we have got to become specialists in X-ray work along these lines, and Dr. Barker's paper proves this most conclusively, it seems to me.

DR. BARKER (closing): It seems that most of the discussion has been centered upon the fact that the X-ray should not be used alone in making a diagnosis. The conclusion of the paper emphasized this point, because it stated that a diagnosis is not made from the plate but rather a reading of the shadows is given, and the otologist is supposed to compare these findings with the clinical evidence. If there is a difference of opinion then the otologist and the roentgenologist may confer, and in this way the X-ray examination will be of value.

There are a few cases where the clinical evidence is not diagnostic and the X-ray will show a pathological condition; in such cases it may be that the otologist will be guided by the X-ray findings.

There are no definite X-ray interpretations that will apply to every case, so that the individual patient must be studied. The difficult part of the X-ray examination is to make a correct interpretation of the shadows appearing upon the plate; this requires study and patience.

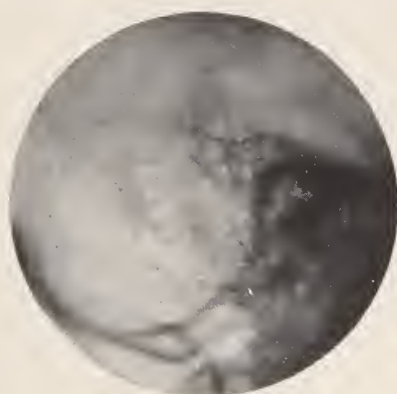
PLATE I.

FIG. 1. Represents group 1 in the text. The roentgenograms are of the left and right mastoids of the same patient. The left is the shadow of the normal mastoid. On the right side the cells are slightly cloudy as compared with the left side, but their walls are clearly outlined. This case cleared up after a paracentesis.

FIG. 2. Represents group two of the text. The right side is normal. On the left side there is a slight cloudiness of the mastoid shadow and the outlines of the cell walls are clearly shown, but they are thickened in appearance. This case was operated upon and neither necrosis nor pus was found but the congestion of the mastoid was such that there was much bleeding from the pneumatic cells when they were cut.

FIG. 3. Illustrates group three of the text. The mastoid on the right side has been previously operated upon. On the left side the mastoid shadow has a blurred appearance, and the cell walls seem to coalesce. This is the appearance when necrosis is present. At operation a dry necrosis was found and no pus.

PLATE 1.



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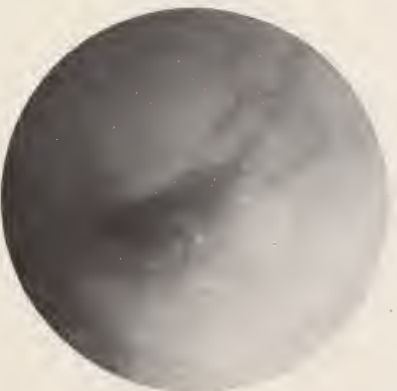


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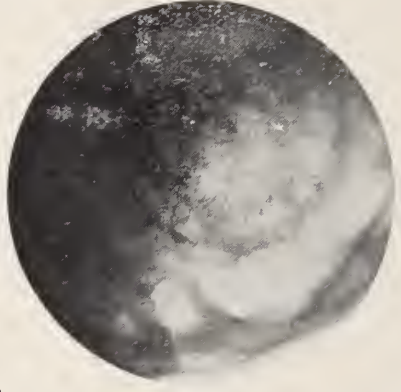
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PLATE 2.

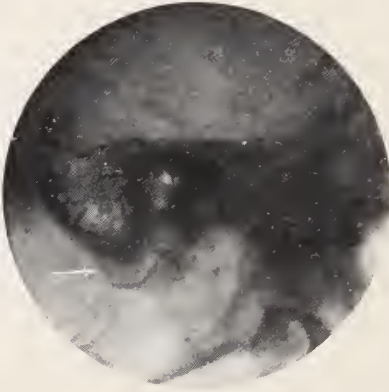


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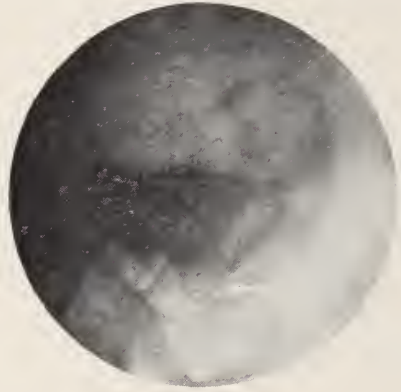


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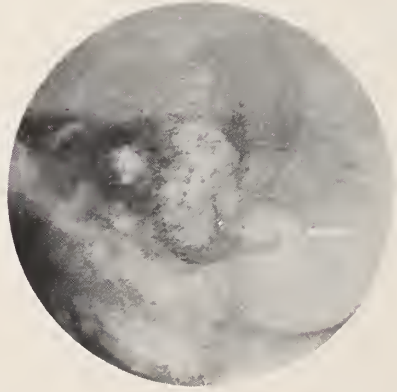


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PLATE 2.

FIG. 4. Illustrates group four of the text. The right side is the shadow of a large pneumatic cell mastoid, normal in appearance. The left side shows a marked increase in the density of the mastoid shadow with no outlines of the cell wall showing. At operation both pus and necrosis were found.

FIG. 5. Represents group five of the text. The left side is a normal mastoid with the diploic cells pushed to the tip, and separated from the pneumatic cells by a bony partition. The mastoid on the right side is symmetrical in arrangement with that upon the left side, as is shown by the diploic cells at the tip. The pneumatic portion is dense in appearance, the density being greater in the region of the antrum, and there are no outlinings of the cell walls present. This is a dense ivory-like mastoid, the result of inflammatory changes. The history of this case supports this opinion; the patient was not operated upon.

FIG. 6. This is a roentgenogram of the left mastoid in which the discharge persisted after the operation. There are cells in the petrous portion of the temporal bone, under the arcuate eminence, which are cloudy in appearance and the walls of these cells are thickened. The discharge from the tympanic cavity stopped after these cells were removed by operation.

FIG. 7. A roentgenogram of a normal mastoid with a very large mastoid canal, through which passes the emissary vein.

PLATE 3.

FIG. 8. The shadow of a normal pneumatic type of mastoid as projected when the head is so placed that the sagittal suture is in the same plane as that of the plate. The central ray from the tube is directed toward the external meatus nearest the plate, and the plane of the tube is tilted 15 degrees toward the face and 15 degrees toward the feet.

FIG. 9. A mass type of mastoid in a child eight years of age. This arrangement of the mastoid is symmetrical, the same type appearing on both sides.

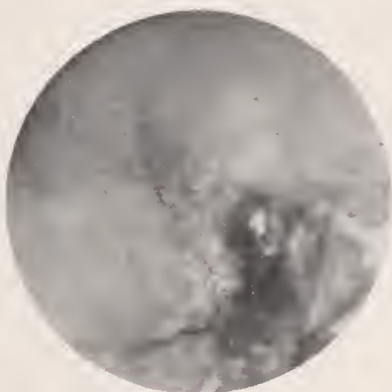
FIG. 10. The shadow of the mastoid so projected that it will show the direct relation of the lateral sinus to the auditory canal. This groove for the sinus is unusually far forward for the pneumatic type of mastoid.

FIG. 11. This shadow of the mastoid is the projection made by rotating the head so that the mastoid on the opposite side to the one to be examined is turned forward from the perpendicular. The central ray is directed toward the external meatus of the side nearest the plate. The plane of the tube is tilted 15 degrees toward the feet and parallel with the plate in the opposite direction. This is the best position for stereo-roentgenographic examinations of the mastoid.

FIG. 12. This position was first described by H. W. Stenvers, of Holland, to show the semicircular canals. It is also a good position to show the cells when they are present in the petrous portion of the temporal bone, and which also communicate with those in the mastoid process. In this case, these cells are normal in appearance.

FIG. 13. The roentgenogram made in the examination of a mastoid of an infant four months old. The vertical arrow points to the meatus of the internal auditory canal. To the left of the arrow are the shadows of the three semicircular canals. Below and to the right of the arrow is the cochlea. The horizontal arrow points to the mastoid antrum and the dense line to the left of the antrum, and directly under the head of the arrow is the shadow of the bony wall which will eventually become the mastoid process. The long, dark shadow extending beyond and below the antrum is due to the cartilage in the auricle, and the rest of the auricle is distinctly outlined.

PLATE 3.



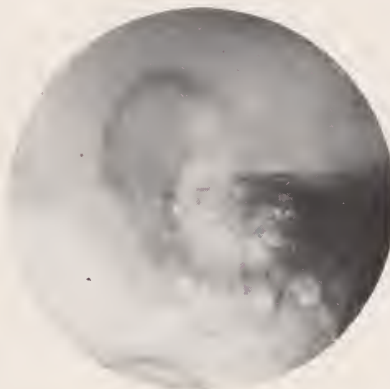
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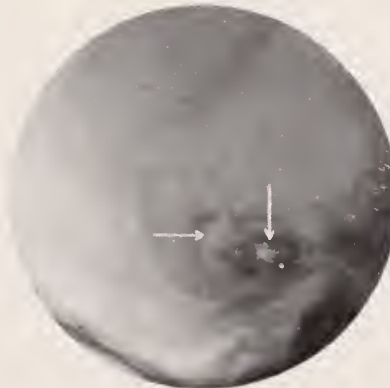
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THE REMOVAL OF NON-MAGNETIC SUBSTANCES FROM THE VITREOUS CHAMBER.*

WILLIAM M. MUNCY, M. D.,

Providence, R. I.

THE time allotted to this paper will not allow a thorough review of the literature upon the subject, nor of the varying courses of treatment depending upon the different conditions which may be found. I have further restricted the topic by confining it to non-magnetic substances.

The first question of paramount importance is whether the foreign body is still within the eyeball. In this particular too much should not be credited to the knowledge of the patient, as the finding of a piece of substance when first the hand is applied to the injured eye does not preclude that there is not more of the same on the other side of the wound, within the eyeball or the orbital tissues. I remember seeing at the last meeting of the College of Surgeons an eye removed with a BB shot in the posterior part of the vitreous. In this case the patient gave a history of the shot having dropped into his hand when he rubbed the eye at the time of the accident, and on entering the hospital he still had it in his hand. In this instance the air rifle was charged with at least two bullets, as the x-ray plate showed another lodged within the eye. In all cases localization should be made by the roentgen-ray unless the history removes without a doubt all chances of the substance casting a shadow; as, for example, a piece of wood pulp.

Whether the eye should be enucleated or an effort made to save it depends largely upon three factors; first, the amount of contusion and area involved by the interference of the foreign body; second, the position of the same at the present time, and third, the amount or probability of infection from the entering substance. If the wound area is far enough forward to have lacerated the ciliary body or dislocated the lens, the chances of good results are enhanced in direct proportion to the injury of this danger zone. If the offending intruder is resting upon the macula or

*Read at the Meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

closely adherent in the region of the optic nerve, its removal would be most difficult. The danger of infection is in direct ratio to the time elapsing between the period of injury and the operative procedure.

The ultimate results cannot be given until years after the patient is discharged, though most of the cases that are to be failures will show some signs of degenerative changes within the year.

I will now report a recent case which will bring out a number of the above mentioned conditions. On December 29, 1919, Mr. M. L. R. was sent to my office by a physician in one of the neighboring towns. Five days prior to this, while working on the roadbed of the trolley system, his pick split a hard rock which drove a piece into his left eye. There was a hot, burning sensation, followed by blindness. On gently rubbing his eye with his fingers he removed a piece of stone. The doctor noticed a slight cut on the sclera, but as there was little injection and but little pain an antiseptic eye-solution was prescribed. When, five days later, the eye became more irritated and the corneo-scleral angle became markedly injected, he was sent to my office. He still insisted that there was nothing in the eye as he had removed the piece of stone at the time.

My examination showed the following: A deepened anterior chamber with the pupillary opening ovoid in shape with the larger curve downward. As seen with the ophthalmoscope the vitreous chamber appeared filled with an irregularly blotched brownish-yellow mass. A number of adhesions between the iris and the lens were noted. The wound, about 7 millimeters long, began at the corneo-scleral junction and extended obliquely backward, showing edges which, though in apposition, had not become agglutinated. The right, or good eye, was slightly involved as there was frequent winking and excessive lachrymation. The vision was 15/15 without glass correction in the uninjured eye, and for light localization only in the injured one.

I had roentgen-ray pictures taken, which showed a large object occupying the center of the vitreous chamber. He was very skeptical as to there being a foreign body within the eye, and only when viewing the object in the x-ray picture would he give consent to any operative procedure.

A general anesthetic was used, and the usual antiseptic precautions resorted to prior to the exploration of the wound. A small cataract loop was selected as the instrument best suited to catch the foreign substance with the least amount of disturbance to the interior of the eye. This was

REMOVAL OF NON-MAGNETIC SUBSTANCES.

inserted parallel to the edges of the wound, gently separating the same, and extending the loop downward and backward, keeping free from the retina but at the same time back of and below the location of the foreign substance. The instrument was then turned one-quarter on its axis so that the broad surface of the loop would engage the stone when drawn forward and upward. My assistant meanwhile throwing an intense light through the dilated pupil noticed something shimmer. It was the reflection of light upon the facets of the stone as it was slightly moved about while resting in the loop. Very carefully the loop was drawn out, obliquely at first, to allow the stone, as it were, to engage between the lips of the wound. As soon as this was accomplished the traction was made parallel, so that the stone came out without any loss of vitreous. About twenty minims of a 10,000 bichloride solution was forced gently through the wound. The wound was closed by a double row of 00 catgut sutures, the first row superficial to prevent loss of vitreous when the deeper sutures located at the outer edges of the scleral wound were applied.

The patient was in the hospital fourteen days. Atropin was instilled in the eye frequently until the adhesion of the iris had been broken, and then twice daily. All symptoms of lachrymation of the right or good eye were wanting after the operation. Aspirin, 1/10 gr., was prescribed every two hours to prevent the return of such symptoms. I have twice seen sympathetic irritation relieved by such a method. However, on the seventh day the left eye became more painful and considerable lachrymation was noticed in the good eye. He had a tendency to keep the right eye closed, and on opening it there would be an abundance of hot tears. (I have intentionally used the wording of the *Materia Medica*.) Aspirin, 1/10 gr., was discontinued and *Rhus tox*, 3x, prescribed every two hours. The following day this condition was much improved and the left eye less painful. On the next day these alarming symptoms had disappeared in both eyes.

He left the hospital on the fourteenth day with the ability to count fingers at the foot of the bed. All signs of iritis were gone, and tension was normal. There was still a yellowish sheen to the vitreous through which the optic disc could just be outlined. Atropin and an antiseptic eyedrop were prescribed.

Although I gave instructions for the case to report in a week and communicate with the local physician frequently, it was March before I next saw the patient. The report was good with the exception that the

vitreous was more opaque and vision reduced to counting fingers at three feet. In April the vision was the same but hypotony was evident. Also there was noticed a number of adhesions between the iris and the lens. There was no injection, pain or lachrymation in either eye. The cosmetic effect is perfect. He returned to work two weeks after leaving the hospital.

As you see, the ultimate end is still a question. About fifty per cent. of such eyes are lost, but is not the effort advisable? I consider the main causes of our present condition due to the fact that the contusion and laceration in the ciliary region must have been considerable, and that some time elapsed before the removal of the stone. The question also arises,—As the stone was of flinty nature and was most likely hot on entering the eye, would that exclude it as a germ carrier?

As this paper was written more as a producer of discussion than for any scientific value it could add to the already voluminous literature on the subject, I hope you will take the opportunity to relate your experiences in this very important field of ophthalmic surgery.

23 Waterman St.

DISCUSSION.

HENRY L. GOWENS, JR., Philadelphia. Pa.: I feel that in all cases localization should be made by the roentgen-ray, for the reason (Dr. Frank, Philadelphia) that if the density of the foreign body is the same as the substance in which it is embedded a shadow will be shown by the general reaction of the vitreous in contrast to that of the good eye.

If the density is less than that of the vitreous the chances are that such a foreign body would not enter the eyeball, much less could it enter the vitreous. If the density were greater a shadow would appear with the roentgen-ray, just as in the case of any object of lesser density, the rule being that substances of unequal density show shadows.

As to whether the foreign body is still in the eye, I think that nothing should be credited to the knowledge of patients, for the reason that they are not qualified to judge the best which should be done for them; and they may, if credit is given to their statements, put us in a position which we may later regret in regard to the course we have taken for them.

Dr. Muncy is to be congratulated upon his result in this case, and especially in his technic of removal. Dr. McReynolds (A. M. A. 73, 11) had little to say before the Ophthalmological Section of the A. M. A.

upon this subject, but Dr. Allport (*A. J. O. S.* 3, V. 3, 2) in discussing the paper of Dr. McReynolds says that objects in this location are very difficult of removal and the operation is extra hazardous. Würdemann (*A. E. O.*, V. 8, 6239) advises that such a condition be let alone. A. Duhamel (*Ann. d'ocul.*, Paris, 1918, CLV, 343, *Abs. S. of H. S.*, V. 1, No. 6) writes of more than 16 cases of non-magnetic foreign bodies, the removal of which was accomplished under control of the radioscopic screen. "The patient having been anesthetized with chloroform, the eye was oriented with the aid of two standards of fine wire in such a manner that the eye of the observer, the wound of the eye and foreign body were in the same vertical plane. Under red light a small forceps with fine flat jaws was introduced closed into the wound and advanced until its extremity covered and in part hid the image of the foreign body. At that moment the operator is above the projectile, and it was then only necessary to descend until contact is attained, which seems to the writer easy for a skillful operator. It sufficed then to open the jaws of the forceps and seize the foreign body for extraction."

I think that the effort is advisable, for then the patient has all done which can be done for him. Such should be the attitude toward humanity.

I cannot bring myself to eliminate any type of object as a germ carrier, not because of its condition, per se, but because it makes an entrance which has not been prepared for it aseptically or antiseptically. I say this notwithstanding the force and heat which the foreign body carries with it, which may not be sufficient to overcome the condition of septicity of the foreign body or of the point of entrance of the foreign body. The ultimate results are controlled as much if not more by the presence or absence of organisms in the body of the patient.

I can recall no instance of a similar condition in my experience. I have regretted seeing eyes lost because of inability to recover a magnetic substance, and I have regretted seeing magnetic substances left in eyes. For the same reason I have the same attitude toward non-magnetic substances. Eight years ago while looking up the literature upon foreign bodies I ran across one case reported on the Pacific coast of a piece of wood in the vitreous causing sympathetic ophthalmia forty years after the accident. This shows the importance of prophylaxis in addition to every known method of extraction, such as used by Dr. Muncy, in removing non-magnetic substances from the vitreous chamber.

E. D. BROOKS, Kalamazoo, Mich. I had recently a case where some

boys were playing at war and one of them was shot in the eye with an air-gun loaded with BB shot. The shot went through the cornea, iris and lens into the vitreous chamber. The x-ray, wrongly interpreted, located the shot in the orbit. The measurements from the apex of the cornea were made as for the normal eye, while this eyeball was flattened by loss of aqueous humor, and of course showed the shot farther back and outside the globe. I protested the reading but was overruled by the others in consultation. Enucleation disclosed the shot within the globe.

The same mistake was made by the same x-ray operator in a previous case I took to him. In both cases the others made the contention that the readings showed the body nearer the apex of the cornea in a shortened eye, which is demonstrably wrong, as the amount of shortening of the globe should be subtracted from the total reading instead of being ignored or added to the same. In reality the fundus is nearer the cornea in a flat eye than in one of normal depth, so the antero-posterior position of a body lodged against the fundus is that much farther forward than the measurements indicate.

NEIL BENTLEY, Detroit, Mich. I think these papers are decidedly interesting. The case of foreign body in the eye is a matter that we see a lot of in Detroit. My practice has run in that line some way or other to quite an extent. In the automobile factories we get these accidents quite frequently. I think the first point to be considered is that a large percentage can be prevented. This is a matter I have emphasized very frequently in all the factories with which I have anything to do.

Another point is that an x-ray of the eye to show presence of foreign bodies is practically useless. There must be a localization of any foreign body.

Infection, as Dr. Muncy points out, depends largely upon the time that elapses between the time of the injury and the time when the foreign body is taken out. In cases where you get them within a short time after the injury, you have practically no infection; if they are allowed to go 24 hours there is a bigger percentage, and if allowed to run 72 hours, you will find a much larger number of cases infected. My own cases have been practically without infection; we have such close co-operation between my office and the factory that I get them almost immediately.

In the case cited by Dr. Weaver he was getting a distinct reaction in the eye—probably a cyclitis; the iris was perhaps involved and there was of course a cornea injury; but a foreign body in the lens may be left for

REMOVAL OF NON-MAGNETIC SUBSTANCES.

some time without much reaction. I have one at present I have had under observation for four or five months; rather to my surprise he is showing no symptoms of cataract. This of course will ultimately have to be removed, but I don't like to perform an operation now as the man still has normal vision.

One other point. Where you have removed a foreign body from the vitreous these cases must be kept in bed and the patient carefully treated. I have insisted that the men be kept in bed for a considerable period of time, say two or three weeks at least, to prevent any detachment of the retina. By making a resection of the external rectus you can determine whether the foreign body is embedded in the sclera, as the eyeball may then be rotated far enough to allow inspection of the posterior pole.

C. L. RUMSEY, Baltimore, Md.: Where a local physician fails to refer such accident cases to a hospital or an oculist for two or more days there is often presented serious eye complications. Besides having an x-ray of the eye, I believe a differential blood-count is most important in these eye cases. I had a patient who consulted me several days after the following accident: The young lad, fourteen years of age, placed a small screw driver in the alarm-winder of a clock, which went off and the screw driver struck the left eye. There was an iridocyclitis and traumatic cataract, with lens substances in flocculent masses in the anterior chamber. There was considerable photophobia and some lachrymation of the good eye. There was no sight and feeble response to light of injured eye. The x-ray showed no foreign particles in the eye. The differential count showed an anaemic condition but no leucocytosis. It was on the last examination I determined to open the anterior chamber of the eye to remove the flocculent lens masses. If there had been any leucocytosis I would have advised immediate enucleation. I do not believe conservative measures would have been proper nor if continued iridocyclitis after opening the anterior chamber of the eye. After opening the anterior chamber, the patient made a rapid recovery.

DR. MUNCY, closing: In regard to localization, we all without doubt feel that some one of the definite methods should be used, but there are times and certain localities in which the x-ray machine is not equipped with the proper apparatus. Ordinary steel frame spectacles with cross wires at right angles so placed that their intersection is over the center and at a known distance from the cornea makes a simple device.

The picture is taken from below upward. Naturally due allowance

must be made for the lowered tension of the eyeball if an open wound is present.

The question whether a small foreign body is just one side or the other of the coats of the eyeball will always at times be a question. One plan used is to have the patient look five seconds directly forward, then roll the eye upward, fixing for five seconds. A simple picture is also taken as a control.

In the first picture if the foreign body is still within the eyeball or its tunics there will be two objects pictured if it is small, and a comparatively much larger than the control if it is of considerable size. However, in one known instance this has failed, due to the fact that though the foreign body had passed through the eye it was adherent to the posterior surface so that it moved as if it were still within.

All I can say in regard to aspirin is that in two cases belonging to other physicians, that had considerable sympathetic irritation, it tided over the condition until they could see them and decide upon enucleation.

The Relative Frequency in the Location of Brain Abscesses of Otitic Origin.—Louis Casamajor, in the *Laryngoscope*, July, 1920, quoting from Heiman's study of 645 cases summarizes as follows:

Temporo-sphenoidal lobe	64.8 per cent.
Cerebellum	29.1 " "
Cerebellum and temporal lobe	1.7 " "
Other locations	4.4 " "
	<hr/> 100.0

W. G. S.

F. Kobrak, *Praktische Ohrenheilkunde*, Berlin, 1918, says that the three tuning forks are tools as indispensable for the consulting room as is the eye mirror.

W. G. S.

THE ETHMOID AREA.*

GRANT S. PECK, M. D.,

Denver, Colo.

THE ethmoid area is receiving much more attention as the science of rhinology is being developed, and this attention is not limited to the ethmoid sinuses but rather to the group of sinuses which are centered in such close proximity in this field. An examination of a bony specimen shows surprisingly numerous cells which go to make up this field.

While it is not the writer's intention to discuss the detailed anatomy of the ethmoid region, since you are all familiar with it, yet it is pertinent to say that oftentimes the value of a paper is enhanced by bringing to the attention of the reader the more salient anatomical points. What it is hoped to do is to elicit discussion of this important area which when requiring attention is a source of a great deal of discomfort.

The later classification divides the ethmoid cells into three sets,—the anterior, the middle and the posterior (Kyle after Cryer), the number and ramifications varying with the different subjects. It will be noted that there are several cells of varying size lying anterior to the infundibulum, one of which is placed high up, and being at times of considerable size; the middle group is situated above the attachment of the middle turbinate body and comprises one or two, and sometimes three cells which are located beneath the horizontal plate of the ethmoid, which with the inner and upper turn of the frontal portion of the orbital plate form an angle or deep depression. These cells are deeply placed, making their entrance difficult and exposing the operator to the danger of puncture of the orbital wall or to trauma of these parts without actual puncture, which may set up an orbital cellulitis. There is one large posterior cell known as the sinus sphenoidalis, which is situated just above or anterior to the upper sphenoid sinus proper.

Much of the so-called nasal catarrh, which we know is a misnomer in so far as it describes any one pathological condition, is now definitely attributable to sinus involvement; hence the relegation of the older

*Presented at the Annual Meeting of the O., O. and L. Society, Cleveland, Ohio, June, 1920.

methods of treatment by means of sprays and topical applications to minor importance.

Many of the changes induced for which treatment is sought are undoubtedly due to abnormal conformations of the septum, the turbinate bodies, particularly the middle, and to enlargement of the ethmoid cells, affecting the normal *ventilation* and *drainage* of the nostril and forming focal fields of infection.

It is possible that simple catarrhal inflammation, either acute or chronic, accompanied by swelling and later by hypertrophic or hyperplastic changes of the turbinate erectile tissue, may be induced by transient local infections, but it is quite likely these are unimportant unless the lumen of the nostril is narrowed by some of the faults of the structures previously mentioned, and unless the infective source has its seat, in reality, in the morbid cells of the ethmoid area. The former type of cases will recover much more promptly than the latter.

There are several different phases which present themselves for our consideration, and we are called upon to consider ethmoidal changes not only because of the local disturbances but also because of more remote affections arising either coincidentally or as causative factors. For example, no one to-day would feel that the subject of asthma had been given the benefit of such technical knowledge as the patient is entitled to unless the ethmoid areas had received due consideration. Likewise, acute or chronic aural troubles can not be successfully dealt with until the superior nares are put in proper repair. Also, faulty *ventilation* and *drainage* are so far-reaching in their effects that one can never too strongly impress upon his patient the great importance of setting this part of his house in order precedent to relief from a multitude of disturbances. In Dr. Myers' paper we will learn of the relief of optic neuritis by ethmoidal operation. We must not forget that headaches are frequently caused by ethmoidal pressure and the frontal fulness so often complained of will not respond to other measures if the nares are obstructed or if there is present sinus infection. Not the least important of these complications is empyema. In the open empyema the danger from extension is not so pronounced, but in closed empyema, in which the diagnosis is much more difficult, there being no discharge, the pressure of the retained pus may extend to the brain, in which case brain abscess may form and a fatal termination follow. The pressure is exerted more in the direction of the orbit, particularly in empyema of the posterior cells, since there is less resistance

in this direction, and perforation into the orbit results. Orbital cellulitis with or without formation of pus in the orbital cavity, causing an exophthalmus, may be the first symptom to suggest ethmoid empyema.

In a case coming under the writer's observation some years ago, at the time the patient—a woman some fifty years of age—consulted me the orbital abscess had perforated externally just under the ridge of the orbit. The ethmoid area showed a group of polyps, with some open cells discharging pus. The ethmoid cells were broken down and curetted, and for several weeks the orbit and ethmoid field were irrigated by inserting the tip of the irrigator into the external opening and allowing the pus and fluid to escape through the nostril. The external opening closed after several months of treatment, and the patient was relieved of a most distressing nasal condition which had existed for several years.

One of the frequent pathological changes found here is the filling in of the nasal fossae by polypoid masses springing mostly from the superior meatal region, sometimes from the middle turbinate body, and in the more extensive cases from the sphenoid sinus. Examination of the ethmoid cells shows polyps growing from the outer walls of the cells and upon breaking them down, shows them growing from the inner surfaces. In fact there are few cases of chronic ethmoiditis in which more or less polypoid granulation is not present, and the finding of these pearly masses suggests investigation of the ethmoid cells, the investigation usually resulting in a diagnosis of ethmoiditis.

These cases come into our hands frequently, and in our earlier experiences no attempt was made to do more than snare off, or attempt to shrink the polyps, while we now know that this procedure gives only temporary relief and that the growths promptly recur. Knowing as we do at the present time that these growths have their origin in the sinuses which group themselves within what Ballinger calls the "vicious circle," it is evident that only radical surgery will give the relief for which we are consulted.

The invasion of the ethmoid area presents, perhaps, as difficult an operative field as one encounters. This is due first to the difficulty of getting a satisfactory view of the operative field; second, to the difficulty of controlling hemorrhage and pain; third, to the fact that one is working through both soft and bony tissue and not as in the usual field where the soft tissue can be cleanly dissected away, thereby exposing the bony field, but where the soft tissue dips down into the irregular bony cells, deflecting

the knife, chisel or curette; fourth, the group of bony cells, the invasion of a part of which may be complete while, owing to the difficulty of seeing the field, others may be left intact; and fifth, the variation in the anatomy and the proximity of the orbital cavity the injury of which may lead at least to unpleasant symptoms if not to a marked orbital cellulitis.

An interesting article has just appeared in the *Journal of the A. M. A.* by Dr. Robert G. Reaves, of Greensboro, N. C., entitled "Nerve Blocking for Nasal Surgery," in which the author sets forth the anatomy of Meckel's (sphenopalatine) ganglion, and the injection of this ganglion by insertion of the needle opposite the second upper molar and entering the lower end of the posterior palatine canal; and also by another injection through the upper and inner conjunctival sac into the groove, the anterior end of which terminates in the anterior ethmoidal foramen at which point the nasal nerve leaves the orbit. This procedure is said to eliminate the pain of the nasal operation, which is frequently difficult to control under the usual measures used in nasal local anæsthesia. The writer has had no experience with this method and rather surmises that its technique would be somewhat difficult to follow.

I think the tendency is rather to conservatism in this field, and even though, as has just been pointed out, we are dealing with one of the most uninviting operative areas, my judgment is, if the patient will submit to it, we should not hesitate to give him the benefit of the relief which is afforded by careful though bold surgery of this region.

One of our boys who had been through the hands of a number of good eastern men, suffering from nasal block, at times complete, together with bronchial wheezing, was advised by his confreres to give up a lucrative practice in the east and migrate west. After a time he consulted me and I found upon examination that both nares were blocked by large and small polyps which filled practically every nook and cranny. There was also the bronchial asthma and general malaise with the train of symptoms with which you are all familiar, and frequent incapacity to carry on his practice. About every three months for several years snares had been thrown around the polyps and they were removed, giving temporary relief, only to be followed by prompt recurrence. I advised the doctor to submit to the radical work of removing the middle turbinates of both sides, and opening and curetting the ethmoid cells. This he consented to do, and prompt relief followed. Later, however, there was some polypoid recurrence, and examination showed small growths from some of the ethmoid

THE ETHMOID AREA.

cells, larger growths protruding from the antrum of the sphenoid. The ethmoid cells were further curetted, the anterior wall of the sphenoid sinus broken down and its cavity curetted. As there was a considerable deviation of the septum to the left, several months later we did a sub-mucous resection of the septum which proved a good measure.

From our first operation the doctor had complete relief from nasal block and from the bronchial asthma and his general feeling is up to tone. An examination recently showed some slight granular tissue, but no obstruction, and free drainage.

I may say parenthetically that it is quite a serious proposition to pick a man out of a good town and a lucrative practice and send him two thousand miles from home to start over in his work when proper operative procedure would have entirely relieved him at home; but in this case it proved a blessing in disguise since the doctor is now doing a much larger practice than he could have hoped to build up in his old eastern home.

A case that came under my observation only recently was of unusual interest. The man, an Italian gardener of about thirty years of age, was attacked by severe frontal headaches coming on every morning about four o'clock at first, and lasting some six or eight hours, when their intensity would subside but not entirely disappear. These headaches were always just over the root of the nose and were so intense that nothing short of opiates would give relief. Some two weeks after they began the patient was referred to me for rhinological examination. There was no swelling of the mucous membrane, no pus present, only a slight mucous discharge, some tenderness over the left antrum, and some over the left eye. Transillumination was negative. There was some pressure of the left middle turbinate body against the septum which was seemingly my only excuse for entering the nostril, yet by elimination it seemed safe to assume that the intranasal pressure was responsible for the supraethmoidal pain.

Acting upon this assumption, the middle turbinate body was removed, the anterior wall of the sphenoid broken down and the sphenoid sinus curetted. The ethmoid cells lying in front of the sphenoid sinus were removed, free drainage established from the frontal sinus and some of the anterior ethmoid cells were opened. As soon as free drainage was established there was marked subsidence of the pain, but not entire relief.

Subsequently, the ostium maxillare was enlarged and for several weeks pus was washed out daily, but this eventually cleaned up. As the patient was difficult to work on for more than a short time, complete exenteration

of the ethmoid cells could not be accomplished except by several operations. At the present time the pain is practically gone and there is only a slight discharge of pus from one of the cells.

A most interesting feature of this case was a free discharge which was thought to be from the frontal sinus, although it was always found after wiping away the pus at the nasal entrance that no pus was brought away with the irrigation. Under cocain and adrenalin considerable time was spent in studying this field. Finally a very small drop of pus showed, and the exploratory probe was passed into the frontal canal without disturbing the pus. The probe then was brought forward to the point of pus where it entered the minutest opening which proved to be the entrance to quite a large cell, an anterior ethmoidal which had been overlooked, lying just in front of the infundibulum. There is still one anterior cell discharging some pus but under the use of Venodine, an iodine solution,* injected intravenously the case is gradually clearing up.

I may say that one of my confreres pins great faith to the use of Venodine, reporting several cases subsiding under its use, but I am of the opinion that it is more applicable in acute or sub-acute cases than in the chronic type.

In conclusion let me say that the surgical procedures evolved for the relief of affections of the ethmoid area mark a decided advance in the science of rhinology.

226 Majestic Bldg.

Multiple Bone Formation in the Tonsils.—J. E. Calhoun, *Laryngoscope*, July, 1920, reports a case of multiple bone-formation in the tonsils in a man forty years of age, verified by microscopic examination by Drs. Cora Hesselberg and Ralph L. Thompson, of the St. Louis University Medical School.

(This seems at variance with the previously accepted idea that bone cells can only spring from pre-existing bone.)

W. G. S.

* Ven-Odine, for intravenous administration, is put up by The Intravenous Products Co., Denver, Colo., and contains:

Sodium Hypoiodite (NaIO), Sodium Iodide (NaI),

Sodium Ortho-cresolate ($\text{NaO.OCH}_3.\text{CH}_3\text{C}_6\text{H}_5$).

Sodium Guaiacolate ($\text{NaO.C}_6\text{H}_4.\text{OCH}_3$) representing 1.6 Gm. (24 gr.) Iodine.

THE TREATMENT OF NASO-PHARYNGEAL CATARRH.*

FRED C. SAGE, M.D.,

Waterloo, Ia.

Definition.—Naso-pharyngeal Catarrh may be defined as an inflammation of the mucous membranes of the nose and throat or accessory sinuses, with a more or less profuse muco-purulent discharge. While the disease may be acute or chronic, and again atrophic or hypertrophic, the last-named is by far the more common form, and the variety and amount of the discharge is the most distressing symptom—the one that brings the patient to his medical adviser for relief. Catarrh is really from a Greek word meaning to flow down. While the quantity of secretion is the most annoying feature of these cases because of almost endless and often unethical effort at removal, still the profuse secretion is largely a symptom. Catarrhal conditions, in fact, mean a subnormal physical condition. They furnish then a splendid index of the amount of resistance and the amount of natural immunity to disease.

Naso-pharyngeal catarrh is a very common affection, most common in our northern states with their sudden climatic variations. If further evidence than our experience of the commonness of the affection is required, we need only observe the number of multi-millionaires in our midst grown opulent by exploiting some of the various proprietary catarrh creams, balms, jellies, or internal alcoholic nostrums. My old friend, Dr. D. W. Dickinson, used to remark in his lectures, "When you see as many sure-cure patent medicines advertised as there are for catarrh, you can conclude the disease is both common and hard to cure." A patient I know made bitter complaint after taking over a hundred bottles of a guaranteed cure only to get the comeback that he had not taken it long enough. Of course the catarrh-cure claims of all nostrums are pure bunk if they do make their clever advertisers rich. The treatment of naso-pharyngeal catarrh will be considered under three parts.

* Read at the annual meeting of the O., O. and L. Society, Cleveland, O., June, 1920.

FIRST—HYGIENE AND SANITATION.

To prevent as well as cure a tendency to colds, coryzas, and catarrh requires both intelligent discrimination and faithful carrying out of personal hygiene. By this is *not* meant the constant coddling and babying, the frenzied fear of every little draft and breeze that blows, the overmuch clothing and furs, the actual phobia for cold air and various other hot-house methods which are classically common. Instead of this quite the contrary practice should be pursued. Two words furnish the keynote: *Develop Resistance*. This idea, faithfully carried out, exemplified and explained Theodore Roosevelt's whole strenuous, stirring career. Some form of muscular exercise to the point of fatigue seems necessary to develop resistance to catarrhal invasion as well as other infections. To be hale and hearty one must exercise and inhale. Brisk walks and deep breathing are splendid, but many need real work out in the gym or elsewhere. Perspiration rather than inspiration means success here as it did with Thomas Edison's inventions.

Muscular exercise should of course be adapted to the individual and should be out of doors as much as possible. Swimming is one of the best summer sports, but rowing, hunting and fishing, tennis, golf, roller-skating, dancing, and volley ball, gardening, auto-riding, and many others are good. The army drill, hikes, equitation and setting up exercises were all fine. Unfortunately many of us neglected proper exercise on returning home and colds and catarrh became very common. But more depends on the regularity than the kind of exercise. Even simple home gymnastics are all right when systematically carried out. Nothing compares with the cool or cold morning sponge, or even a plunge followed up by a brisk rub, to build up bodily vitality and resistance to disease. Too much clothing is as bad as too little clothing. The too common practice of sitting in warm churches or movies without removing one's furs and heavy coats is no less than barbarous. But rubbers should be worn in cold, sloppy weather, as cold, wet feet cause many colds.

Plenty of fresh air in sleeping rooms is essential to health. To insure having healthy mucous membranes probably requires the normal functioning of all organs of the human mechanism. But a clean skin with all its millions of pores on active duty means most of all.

TREATMENT OF NASO-PHARYNGEAL CATARRH.

SURGICAL TREATMENT.

The limits of this paper prevent more than a mere mention of this subject. But many bad cases of naso-pharyngeal catarrh are essentially surgical and need surgical measures.

That diseased or enlarged tonsils, adenoids, nasal polypi, or any obstruction in the naso-pharynx, including hypertrophied turbinals, deviated septa or an infected sinus or antrum, should have proper surgical care goes without saying. The removal of nasal polypi should be followed by the local application of alcohol, 20 per cent., or some mild cauterant to prevent recurrence. Following antrum operation the author has had good results from injections of one per cent. sodium hypochlorite or "Hyclorite" where other treatment had failed to control the discharges. Assuming now that all intranasal obstructions have been removed, we come to the

MEDICAL TREATMENT, LOCAL AND GENERAL.

In acute coryza the patient should remain at home and the aged or weak should stay in bed a few days. This protects the patient from exposure and the public from contagion, as colds are most certainly contagious. Dover's tablets, given in from five to ten grains with some hot drink, will induce sweating and help break up a cold—followed in the morning by a saline laxative—and is still the standard treatment of some physicians. Others use quinin in varying doses. The Dover's upsets the stomach and the quinin causes much ringing in the ears. The Dr. Kenyon coryza tablet containing

Morphin sulphate	$\frac{1}{8}$	gr.
Camphor	$\frac{1}{2}$	gr.
Quinin sulphate	$\frac{1}{2}$	gr.
Atropin sulphate	$\frac{1}{2000}$	gr.

is more popular and useful, and less harmful. Still the careful prescriber need not combine or use large doses to get the very best and quickest results.

Aconite quickly relieves cases caused by high, dry winds, with great restlessness and liking to be near the fire. Give the 3x often till patient perspires; then follow with gelsemium or bryonia. Gelsemium is often used in coryzas of summer with moist relaxing weather. The camphor patient feels cold but doesn't care for a fire. Drop doses of the tincture given often is the rule. Later Allium cepa is indicated with the bland discharge

from the eyes, while the nasal discharge is smarting and excoriating. There may be cough and hoarseness, sneezing on entering a warm room. The onion syrup our mothers made was all right, as well as cooked onions or even the raw onion. But some one has said that while an apple a day keeps the doctor away an onion a day keeps everyone away. At least the obnoxious onion poultice to the chest can safely be supplanted by warm camphorated oil and a cotton jacket. For the lung complication in the cepa patient, phosphorus 3x is generally the remedy.

Arsenicum is often the remedy in winter colds with sneezing, dull frontal headache; then acrid, watery, burning discharge; nose much stopped up; middle turbinals enlarged, and the patient better out doors. Ars. iod. is more often used and has the most profuse discharge of any remedy. The discharge is variable but often acrid, with constant sneezing. In frontal sinus involvement with the above symptoms Ars. iod. is our sheet anchor, given 3x every one or two hours. It is in these cases that an atomizer spray of camphor-menthol, 3 per cent. of each., in albolene, and containing a few drops of oil of eucalyptus to the ounce, is of the greatest service. Frequently repeated it relieves swelling and turgescence, promotes drainage and often prevents the need of sinus operation, and it is always safe. Kali. iod. 3x may be needed in frontal sinus involvement with pain in sinus and on blowing nose and in suspected luetic patients.

Other remedies in acute colds are eupatorium per. for bone pains and soreness of muscles; Fluoric acid in the sudden attacks of coryza, especially in drunkards (little used since July 1st); the mercuries, Natrum carb., relieved by perspiration and worse from slightest draft; Natrum mur. with its cold sores, and Sanguinaria with its acrid stinging watery discharge, dull pain at root of nose, the loss of taste and smell and dry tickling cough—a remedy much used also in the Flu coryzas. If acute catarrhs have been treated as outlined few become chronic. But many cases go entirely untreated until a chronic, untractable catarrh has developed. Then are often indicated Ars. iod. 3x, which has a wide range of action in the nose and throat catarrhs with profuse secretion, varying in character or in scrofulous patients with enlarged lymphatics and in the tubercular subject.

Argentum nit. has the rawness and soreness of the throat with tenacious mucus. The Hepar sulph. patient has the profuse, slightly yellow discharge with sensitiveness as a keynote—sensitive to touch; bones of

nose are sore and sensitive to cold air; sneezing from least uncovering in bed—so sensitive.

The Kali. bi. patient has the tough, adherent, stringy, ropy discharge, and sometimes ulcerations. Pulsatilla has a profuse bland discharge, alternating with dryness, loss of smell and taste, and worse evenings, while Natrum mur. has loss of taste and smell and is worse mornings. Some textbooks mention various remedies having a clinical picture of syphilis. With a plus Wassermann or a good clinical diagnosis organic arsenic or mercury should be promptly used intravenously. Local treatment is of course important, but far too many specialists depend on local treatment alone. The patient needs general as well as local treatment. A cleansing spray or gargle is the first indication in most cases and any of the mild alkalin sprays are good, or a normal salt or soda solution, 10 grains to the ounce, answers as well. After thorough cleansing, astringents are generally beneficial: Silver nitrate, 20 grains to the ounce; Lugols No. 1 Iodine, 5 parts; Kali. iod. 10; glycerine 20; or Lugols No. 2, or argyrol 10 to 25 per cent., and many others are good, generally using $\frac{1}{2}$ weaker strength in the nose than throat. The argyrol tampons are fine in the nose, especially in ethmoid sinus infections. Sometimes the yellow oxide of mercury ointment, 2 per cent., helps to heal up troublesome ulcers in the nose. The glycerole of tar spray for chronic throat cases is mild but excellent. Then there are the numerous albolene sprays containing the eucalyptus and pine needle oils, with menthol, camphor, etc.; all at least grateful to patients and more or less helpful. Of throat lozenges the Parke Davis rhinitis No. 330 is an excellent formula. As atrophic rhinitis requires special consideration it is not discussed in this paper.

In summary conclusion: Naso-pharyngeal catarrh is not a simple thing to treat and each case must have individual attention. But proper hygienic and sanitary general and local treatment will build up the patient's resistance and make him physically fit to do his part in these strenuous days, and enable him to make the most of his life.

DISCUSSION.

MARY L. LINES, Brooklyn, N. Y.: I agree with Dr. Sage in that chronic naso-pharyngeal catarrh is often a very difficult thing to treat. After all known surgical and constitutional causes are removed, so far as possible, systematic physical exercise, with a restricted protein diet, having the patient live largely upon fruits and vegetables, has a better result in

chronic cases than any method of local treatment or remedies that can be prescribed, except the argyrol tampons in ethmoid cases which we all use with so much success. In simple acute cases our homeopathic remedies are all that can be desired. I don't think Dr. Sage needed to mention Dover's powders or other Old School remedies containing morphin, etc., and the use of aspirin cannot be too severely or too frequently denounced. There may be chronic cases which will require a Wassermann or an x-ray to clear them up.

Catarrhal Deafness and the X-ray.

Mrs. S., aged 36, a healthy young married woman who had been suffering from catarrhal deafness in the left ear since a diphtheritic attack in childhood. She developed severe and disfiguring acne vulgaris of the face, for which x-ray treatment was recommended. No figures are available as to the grade of deafness in the left ear, but she says that she could scarcely hear. She noticed immediate improvement in the hearing on first x-ray treatment. Subsequent treatments helped further until she could hear nearly normally. The x-ray produced a mild burn and was abandoned, but the hearing has remained and is now good.

D. M.

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Editorial

CHRONIC MIDDLE EAR SUPPURATION; ITS CAUSE AND CURE.

(Continued)

G. W. MACKENZIE, M.D.,

Philadelphia.

IN the editorial of last month dealing with this same subject it was pointed out that inasmuch as chronic middle ear suppuration follows the acute form, the causes of the chronic must necessarily include those of the acute suppuration. Among the predisposing causes mention was made of enlarged adenoids, septal deflections and other forms of nasal obstruction. These comprise an important group of local conditions in the nose and nasopharynx that predispose to, but of themselves are insufficient to cause middle ear suppuration. For instance, we find individuals affected with obstructive conditions in the nose and throat without ever having developed any pathologic condition in the ears. When, however, an individual so handicapped contracts an infection in the nose and throat the resulting swelling of the mucous membrane, and of the adenoid particularly, brings about a greater degree of obstruction than previously existed, with the result that oxygenation is diminished, allowing a more rapid and greater extension of the acute inflammatory process than is prone to occur in an individual free from these nasal and nasopharyngeal obstructions. Some of these individuals develop tubo-tympanic inflammations, but not all; from which we may consistently assume that nasopharyngeal obstruction plus a nasopharyngeal infection appears to be sufficient in a fair proportion of instances to produce tubo-tympanic inflam-

mation. That some but not all individuals who have nasopharyngeal obstructions develop tubo-tympanic inflammation in the presence of an infection would suggest that other factors must be at work to promote middle ear trouble in some and not in others.

Some of us have trained ourselves to accept the theory of individual resistance as measured by the power of one's tissues to combat particular infections. This theory, which had its inception with Jenner more than a century ago, has been developed considerably by the more recent investigations in the fields of biology and biochemistry. At the present time this theory, also referred to as that of immunity, is generally accepted as a law, so much so that it is difficult to find anyone in the profession today who is willing to deny a child suffering with diphtheria the benefits accruing from the injection of antitoxin (immune substance). Granting that every individual possesses some degree of resistance at the beginning of an infection, or at least shortly after the infection has begun to manifest itself locally and generally, this resistance varies in degree in different individuals.

The power of the individual to generate a resistance (antibodies) is the most important factor in limiting the scope of an inflammatory process. In those individuals possessing great power for generating antibodies, the nasopharyngeal infection is more quickly circumscribed; in fact, some few individuals possess the power to such a wonderful degree that the infection is practically aborted shortly after it has begun, as instanced in those cases of aborted pneumonia witnessed now and then by every general practitioner. In those individuals possessing somewhat less power for generating antibodies, the nasopharyngeal infection is not so promptly circumscribed. The infection, therefore, tends to spread and involve the eustachian tube and middle ear cavity before the human organism can generate a sufficient amount of antibodies to thwart it. It is in this last class of acute cases that vaccines carefully selected and judiciously administered has *apparently* worked advantageously. This opinion is offered with the qualification, *apparently*, since it is difficult to prove the claims of some as to the efficacy of vaccines in acute infections, for the reason that most individuals tend to react favorably against such infection and recover spontaneously.

In those cases where the nasopharyngeal infection is aborted before the eustachian tube is involved, no involvement of the tube

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or ear takes place. In other cases where the generation of antibodies is somewhat slower, but sufficient in amount to stop the spread of infection beyond the tube, there results a tubal inflammation, only the middle ear escaping. In those individuals manifesting the least ability to generate antibodies the inflammation spreads farthest and most intensely.

No one who accepts the Law of Similars can consistently deny the theory of immunity. The two are not the same, yet they are correlated.

Vitality is another important factor in the etiology of infections, and, too, in the patient's reaction to them. Where the vitality is high the reaction to infection is vigorous, and the resulting disease takes on the so-called sthenic type; where the vitality is low the reaction is feeble and the resulting disease takes on the so-called asthenic type. The lack of vitality allows inflammatory processes once begun a greater leeway than is generally conceded by the profession. Many a quack thrives well because of a consideration of vitality in the treatment of a certain class of ailments where the legitimate physician has failed on account of his lack of consideration of this factor. Most of us can recall instances of the kind where the only treatment the patient received was strict attention to diet, baths of various kinds, massage, enforced rest, etc., and in spite of no medication there resulted marked improvement in health by the adoption of these sensible measures prompted by faith on the part of the one administering the treatment that what the patient needs most is "building up." Horse sense on the part of a layman accomplishes at times what the academic mind of the physician fails to bring about.

The question of vitality is a subject in itself and one well worth considering in detail. The Organon is full of it. There are cases of running ear which tend to become chronic where attention to the vitality alone is sufficient to clear up the suppurative process. Furthermore, where the vitality is deficient, attention to no other factor will serve as well. This was taught in the Politzer School by Alexander and others. Hahnemann realized its importance.

There are other factors which tend to prolong suppuration of the middle ear beyond the acute stage which will be taken up later.

G. W. M.

A NATIONAL DEPARTMENT OF HEALTH.

HOW many of us doubt the need of a National Department of Health?

Surely not the doctors, who can see in this move a most efficient coordination of many disjointed efforts; who can see in it also the representation it will give them, voicing their interests and the interests of the health of the community; surely not the educators, who can see in it a standardization of education; not the investigators of our scientific problems and "incurable" diseases, who can see in it investigation supported and carried on upon a grand scale; and surely not the public health man, who best of all can see the need of this new establishment.

We have no trouble in conceiving the power, the efficiency and the economy of a National Health Department; these things, and many more, we see and understand fully. The problem of establishing this department means now but one thing; it is up to someone to initiate the push to put it through. To whom should this more particularly apply than to the medical man? It behooves each one of us to see that the societies of which we are members endorse strongly this project. There are committees of health and sanitation in both House and Senate to which these endorsements may be sent. Our representatives in Congress are elected and paid for looking after just such business—the making of legislation that we want; they are more than willing to follow a voice sufficiently urgent. It is up to us.

D. M.

CONGRATULATIONS TO A HOMŒOPATHIC
PHYSICIAN.

ALL peoples of all times have conceded that the medical profession is the noblest to which any man or woman may be called. Furthermore, the great philosophers and the leaders of men have, with few exceptions, been physicians. It was the medical profession that made possible the great strides in civilization. Where medical knowledge is advanced to its highest, there also do we find civilization the highest, and vice versa.

It is with justifiable pride that the medical profession can point

EDITORIAL

to one, Dr. George T. Harding, of Marion, Ohio, as the father of our next President, Warren G. Harding, and especially proud are we of the fact that Dr. Harding, the father, is a homœopathic physician. Therefore, the physicians generally and the homœopathic physicians especially, feel a keen interest in the material well-being of Warren G. Harding, President-elect of the greatest country the world has ever known. May he be guided in all his future acts by the same God to whom he appealed immediately after his election.

THE INCOME OF PHYSICIANS.—Statistics made from a questionnaire sent out by the Committee on Medical Economics of the New York State Society may be summarized as follows:

In New York City:	Income.	Expenses.
General Practice	\$5,876	\$2,355
Specialists	12,717	4,280
Part Time Specialists	9,022	3,183
In Second-class Cities (over 100,000):		
General Practice	3,635	1,853
Specialists	8,604	2,502
Part Time Specialists	9,037	3,011
In Third-class Cities (50,000 to 100,000):		
General Practice	3,554	1,004
Specialists	6,439	3,375
Part Time Specialists	10,745	3,687
In Fourth-class Cities (below 50,000):		
General Practice	4,766	1,752
Specialists	9,101	3,774
Part Time Specialists	8,554	2,759
—N. Y. State Jour. Med., Aug. 1920.		D. M.

AN UNUSUAL CASE OF SINUS THROMBOSIS.*

DEAN W. MYERS, M.D.,

Ann Arbor, Mich.

THE subject of this sketch was born in August, 1903, and the mortuary statistics do not as yet contain his name. He has always been a very healthy lad, suffering only with the ordinary diseases of childhood until a few years ago, when he had a very severe attack of malaria in Korea where he was living at that time. His family history is negative, his father and mother being healthy, the other members of the family also being well. During the past summer he has been acting as life-guard at the local swimming beach. He has been a boy of unusual vigor and muscle, priding himself upon his athletic ability; wonderfully well developed, fine figure, strong muscles, and of excellent habits. Following his activities as a life-guard at the swimming beach he observed an acute pain in the right ear. This pain increased until he was obliged to seek medical attention.

I was first called to see him after this pain had been going on for about one week, and found him in bed on September 4th, suffering from a pain in the right ear with a small amount of discharge. At this time there was no swelling over the mastoid, although deep pressure developed a little bit of pain. The ear was given attention, the nose and throat cleansed and sprayed with argyrol and the ears inflated. He was relieved for a short time, but during the evening the pain increased again, and he was taken to the hospital on September 6th, where he was given attention until the eve of September 7th, when the pain was increased to such an extent that I was called to the hospital to see him again. I found him suffering from an intense pain in the right ear, a small amount of discharge coming from the canal, and marked tenderness over the mastoid. Blood count R 4,800,000; W 10,100.

Operation was considered advisable and he was prepared and operated for acute mastoiditis Sunday night, September 7th, the operation beginning at 9.30 and being finished at 11.00. The

* Read at the Annual Meeting of the O., O. & L. Society, Cleveland, O., June, 1920.

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mastoid cells were all removed down to the ring, and including the tip of the process. There was not a large amount of pus in the cells at this time but each one contained a certain amount of yellow, semi-watery, purulent material. There was nothing unusual about his case during the night, pulse ranging from 130 down to 112 at 6 o'clock in the morning, when his temperature was recorded as 101.2 degrees. He complained of his head feeling sore but wanted something to eat and seemed to enjoy some broth that was given him.

Monday morning, first day after the operation, at 8.45, his temperature showed 102 and pulse 108; at 9.30, temperature 102.6, pulse 100; at 12.10, temperature 104.4, pulse 120; at 1.45, temperature 104, pulse 120; at 3.00, temperature 103.6, pulse 104. He seemed to feel very good, complained of very little pain, but was restless and called for water almost constantly. Some swelling of the neck below the incision. Slept frequently for short intervals. At 4.00 the temperature was 104, and at 7.00 it was 103.8; at 8.50, 103; at 9.30, 103; at 10.30, 103; at 11.30, 102.8; pulse ranging from 112 down to 102, 98 and 96. He became somewhat irrational during the afternoon and Monday night. Toward morning the temperature gradually declined to 101.8 at 5.00, rising to 102 at 6.00. Remedies during this time were echinacea and belladonna.

During the day, Tuesday, September 9th, second day after the operation, the temperature ranged from 102.6 at 9.15 in the morning to 103.6 at 4.00 in the afternoon. In the afternoon of this day he began complaining of his body feeling itchy. A bright red rash appeared all over his entire body and limbs. Tuesday night the temperature ranged from 102.4 down to 101.8, pulse from 120 down to 108. The patient was very restless. A blood-culture was taken. He talked at random and seemed delirious and at times tried to get out of bed. Amount of sleep recorded for twelve hours, three and one-half hours.

On September 10th, third day after operation, he was given arsenicum album, and ice-packs applied to the head and wrists as usual. At 2.30 in the afternoon his temperature having remained about the same all day was 102, and he was sleeping soundly, also sleeping soundly at 3.00. At 7.00 he complained of throat feeling sore and on the whole had rather a restless day. During the night the pulse declined to 108. A slight chill occurred but he was much more quiet this night. His temperature declined as low as 99 and

was 100.4 at 6.00 P. M. The rash still covered his entire body; and he slept in short naps. He slept much better during the night and on Friday, September 12th, fifth day, temperature ranged from 98.4 to 100.4, pulse from 72 to 82. He was recorded as having been fairly comfortable all day, although he did not sleep very much. His nourishment consisted of toast, cocoa and ice cream. Kali muriaticum was the remedy during the latter part of the day. At 10.00 in the evening of Friday the dressings were changed, being soaked through with moisture. Silicea 200th, was given, temperature 99.4, restless during the first part of the night, and rested well after 1 A. M.

Saturday, sixth day, the patient's condition being so much improved it seemed as though he was on the road to recovery, and I started upon a few days' vacation in the northern part of the State. The care of the case for one week was in charge of my assistant. During the day, Saturday, the temperature went from 100 at 6.00 in the morning to 103.6 in the afternoon, pulse from 96 to 120. The patient, however, seemed to be feeling fairly well. At 9.00 that night the temperature was 102.4, at 1.00 A. M. 101.4, at 3.00 102, pulse 90 to 100. Patient rested fairly well during the night. Complained of lameness in the hips. On Sunday, seventh day, the temperature ranged from 102 to 104.4, the pulse ranged from 80 to 108. He slept very well, natural bowel movement; soup, toast and grape-juice given for nourishment. At night the temperature rose to 102.4 at 9.00, 101.4 at 1.00 A. M., and 102 at 3.00 A. M. Pulse was from 80 to 110. He rested fairly well and felt bright in the morning.

Eighth day, rash beginning to disappear. At 6.00 temperature 103.2; at 10.00, 103; at 1.00 P. M., 105; at 2.00 P. M., 104; at 3.00 P. M., 103; at 6.00 P. M., 103.6. At this time another blood-culture was taken by Dr. Parnell, bacteriologist of the University. His blood-culture this time revealed a marked bacteremia, the report stating that the germ was one of the most virulent haemolytic streptococci ever encountered by this laboratory. During the night his temperature remained around 104.

From Tuesday, ninth day, the temperature remained nearly 104 continuously, and a diagnosis of sinus thrombosis having been made, operation was decided advisable and started at 1.00 P. M. Tuesday afternoon, September 16th. He was returned from the operating room at 2.10, pulse 120, and at 6.00 P. M. temperature

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104.4 with pulse 100. During this operation the patient became so weak that the operation was cut short and the patient hurried back to bed; pulse so weak and rapid that it could not be counted. During the night the temperature rose to 104.8, pulse 110, reported full and regular. At 1.00 P. M. a slight chill lasting five minutes, temperature 104.4, sleeping quietly for over an hour, at times sleeping apparently very soundly. At 1.00 temperature 105, at 2.15 temperature 105, pulse 112, at 3.15 temperature 104.6, pulse 108, sleeping at intervals. Patient has some trouble raising mucus from throat. At 5.10 A. M. temperature 103, at 6.10 A. M. temperature 102.4, pulse 96, coughing up considerable thick yellow phlegm, perspiring a little, enjoys his nourishment, ear discharging quite freely.

During the day of Wednesday, September 17th, tenth day, temperature went from 103.4 to 105.4. At 2.30 P. M. a severe chill, patient felt cold, teeth chattered, features pinched and blue; pulse hard, rapid; chill lasted fifteen minutes, followed by a feeling of intense heat. At 9.00 Wednesday night temperature was 105, pulse 104, respiration 32. Gradual decline of temperature at 3.30 A. M., when it was 103, pulse 98, respiration 30. At 6.20 it had gone up to 104. Slept very heavily most of the night. Complained of feeling very tired in the morning with aching of his bones. At 6.40 A. M. there was a slight chill lasting ten minutes, not very severe.

At noon on Thursday, eleventh day, the temperature had dropped to 101.6 but at 6 in the evening it was 105.4. The morning of this day he complained of feeling chilly, was coughing somewhat and towards noon perspired very freely. Slept considerably through the day. At 3.00 in the afternoon an autogenous vaccine, $\frac{1}{2}$ c.c., was given per hypodermic subcutaneously. He complained of being very thirsty and about this time developed deafness in the opposite ear. During the night he slept fairly well with a full, regular pulse, temperature ranging from 104.6 down to 102.2 at 4.00 in the morning. He had a slight cough, complained of gas in the bowels and during sleep there was considerable twitching and jerking of the limbs, often jumping suddenly out of his slumber.

At 6.30, twelfth day, his temperature was 101, pulse 88, respiration 26. Patient sleeping soundly. Temperature ranged from 101 in the morning to 105 at 6.00 in the afternoon, ends of his hands and feet feeling numb, his face feeling cold. Slept considerably during the day. The incessant thirst continued, arsenicus

album 200th, was given during the day. All Friday night the temperature remained above 105, going as high as 105.6 at 10.00 in the evening. He was very restless and tossed about the bed, slept only a few minutes at a time. Large quantities of gas passed and some of the enema water retained from gas enema given at 6.00 P. M. At 6.00 in the morning the temperature had fallen again to 100.6.

At noon on Saturday, thirteenth day, the temperature dropped to 98.6, pulse 52, respiration 22. He complained of his bowels hurting but slept an hour during the forenoon. At 12.45 he had a very hard chill which lasted twenty minutes, followed by intense heat. At 3.00 the temperature had risen to 105.8 and dropped a degree at 6.00, but went up to 105 at 9.00; at 10.00, 104.4; at midnight, 103.6; at 3.15, 99.4; and at 6.15, 100.4. Patient perspired quite freely nearly all the night, necessitating change of gown and bed linen. He slept quietly some of the time.

Sunday, September 21st, fourteenth day, late in the day I returned from my vacation and found him a very sick boy. His temperature this day ranged from 103 at 9.30, to 104.6 at 6.00 in the evening. He perspired quite freely and was in a very weak condition. Autogenous vaccine, $\frac{3}{4}$ c.c., administered subcutaneously. Restless during the night; he complained of bowels hurting and expelled considerable gas. He perspired freely all night, temperature rising to 105.2 at 9.00, and dropping to 101.4 at 3.30, and 100.8 at 6.00.

Monday morning, September 22nd, fifteenth day, the sigmoid curvature of the lateral sinus was exposed and opened. It was found to be filled with a tough membranous formation which extended up and down the lumen of the vessel, which was completely empty of blood. This membranous formation could be drawn out in large pieces with forceps and there was no bleeding from the vein in either direction. Subsequently bleeding was established from the cranial end of the vein by curettage from an inch to an inch and one-half above the upper bend. In a downward direction it was impossible to establish bleeding, and the incision from the mastoid was extended to the sternum, the jugular vein exposed and found to be in the same condition from the jugular bulb to and into the thoracic cavity. The vein was resected from the jugular bulb downward as far as possible and a probe passed into the vein toward the thoracic cavity, but bleeding could not be estab-

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lished, the above condition of the vein extending beyond all possible reach. It was decided with this condition of the vein that the boy could not possibly recover, the neck was closed without removing the jugular bulb, drainage supplied in the form of rubber tubing and he was returned to the bed.

The operation was performed with the use of almost no general anesthetic, a hypodermic H. M. C. had been given about an hour before the procedure and with very, very little ether the operation was completed. He was returned to his room with some cyanosis of the face, a pulse of 90, respiration 32. At 12.30 the patient was reported better and he was beginning to react from the operation. Pulse remained at 86 and 82 until 6.00, when it went up to 90, temperature 103.4. (Patient says he feels fine). Slept for twenty minutes in the morning, picking at the bed-clothes and talking considerably in his sleep. At night his temperature ranged from 100.6 to 101.4, and down to 101 at 6.00 in the morning. General condition remained about the same. Slept soundly portion of the night and in the morning, sixteenth day, said he was feeling fine, perspiring freely with slight facial paralysis on the right side. Dressing was changed and moist iodoform packing used in the mastoid incision. Temperature was 98.6 at 9.00 in the morning; 98.8 at 1.15, and 104 at 3.00 in the afternoon. At about 2.00 he had a severe chill which lasted twenty minutes; fell asleep following it from exhaustion and seemed to be extremely cold. Slept about twenty minutes and upon awakening the body was warmer. Later in the afternoon he was sleeping and talking in his sleep, reaching for things in space. During the next twenty-four hours his temperature remained about 104, until 9.00 Wednesday morning, seventeenth day, when it dropped to 98. At noon it was 98.2 and chill followed about 1.00, the temperature rising to 103.8 at 6.30 in the evening. He had tomato soup, glass of milk and small cookie for his supper, which he enjoyed very much. During the night the temperature ranged from 102 to 103.4, dropping to 99 at 8.45.

Thursday morning, 25th of September, eighteenth day, 1 c.c. autogenous vaccine given subcutaneously. In the afternoon another chill, temperature going to 103 at 3.00, and 102 at 6.00 in the evening, at which time he was resting very quietly and relished some food. At 9.00 in the evening his temperature was 104 and down to 100 at 3.00 in the morning; 98.2 at 6.15, nineteenth day, gradual decline of temperature until 1.30 when he had another

chill lasting fifteen minutes, temperature rising to 104 and dropping to 101 at 6.00. He was very uneasy, turning from side to side, but not coughing so much, complaining of his back hurting him worse. Rhus tox 200th, was given. Temperature did not go quite so high this night, ranging from 102 at 8.45 in the evening to 98 at 6.30 in the morning. He slept well all night.

Saturday, September 27th, twentieth day, he showed some slight improvement, temperature did not go above 103, and down to 98.8 at 9.00 that evening. This is the first day since the third operation that patient has not had a chill in the early afternoon. At 9.15 in the morning, twenty-first day, had musk-melon, rolled oats and cream, with a small piece of candy for breakfast. He relished everything, complaining that there was not enough food to satisfy him. At noon the temperature was 98.6; at 3.00, 100.8; at 4.00 he felt chilly with some little chattering of the teeth. At 6.00 the temperature was 104, pulse 100, respiration 24. He had been hungry all day and had been well fed at all three meals. In the evening he had bread, two cups of milk, a small amount of creamed potato, and some of the pumpkin from a pumpkin pie without the crust. At 9.00 in the evening the temperature was 104, pulse 106, respiration 34. At 4.30 in the morning, after considerable comfortable sleep, the temperature dropped to 97, pulse 82, respiration 22.

The next day, twenty-second day, he was allowed to sit up in bed for a short time and the temperature ranged from 98 at 9.00, to 98.6 at 12.00, 102 at 3.15, and 103 at 6.00 in the evening. At 9.00 it was 103.4, at 1.15 it was 98.6, and at 6.00 in the morning of Tuesday, September 30th, twenty-third day, it was 97.8, pulse 82, respiration 22. The chart shows that he slept nearly all night. He feels very good this morning and very hungry. Tuesday, temperature normal until 3.00, when a chill, which lasted fifteen minutes, came on, followed by rise of temperature to 103.8 at 6.00 in the evening. Had 1 c.c. autogenous vaccine subcutaneously at 8.15 A. M.; blood-smear and culture taken by Dr. Parnell early in the afternoon. He fell asleep following the chill, awakened very restless and complained of being thirsty, some redness of the skin in certain parts of the body. He complained of his bowels hurting him some for which a hot-water bag was applied. His appetite was good, complaining that there was not enough food to satisfy him. He slept most of the night, perspiring some.

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Wednesday, October 1st, twenty-fourth day, he had a slight chill, lasting about ten minutes, at 3.00 in the afternoon; temperature was 98.2 at 9.00 in the morning, and 98 at 12.00, 101.6 at 3.00, and 101.8 at 6.00, going back to 99.4 at 9.45, and 98.8 at 6.20 Thursday morning. Thursday, twenty-fifth day, he had no chill; temperature was 98.4 at 9.00 in the morning, the same at noon, rising to 103.4 at 6.00 in the evening. He slept very much during the day. At 8.50 P. M. the temperature was 103.8, dropping to 98.6 at 2.00 in the morning and 98.2 at 6.30 A. M.

On Friday, October 3rd, twenty-sixth day, there was a reversal of form, the temperature being 102 at 12.00 noon and dropping to 99.4 at 3.00 and remaining at 99.4 until 6.00. The first time it had remained below 100 at 6.00 in the evening. The chart states that he had a very comfortable day and seemed very much improved. At 9.40 the temperature went up to 102.4, but was back to 98 at 6.30 on the morning of Saturday, October 4th, twenty-seventh day. It remained about 99 all day and until 6.30, when it was 102. The chill this day consisted simply of a slight feeling of being cold. Three hearty meals, with hot toast at 10.00 and ice cream at 2.45. Temperature was taken twice during the night, 99 at 10.30 and 99.2 at 6.00 in the morning. Awakened with a slight chill which lasted for fifteen minutes just after midnight. He slept four hours at one time without waking. Perspired quite freely during the early morning hours. Blood-culture report showed a marked decrease in number and virulence of streptococci present, 60 per cent. improvement.

Sunday, October 5th, twenty-eighth day, temperature remained at 98 all day, except at noon, when it was 98.2. He slept some during the day, feeling very good, and had a slight epistaxis toward evening.

Monday, October 6th, twenty-ninth day, temperature did not go above 99 day or night. On Tuesday, thirtieth day, he had a slight chill in the afternoon at 2.30, followed by rise of temperature to 101.6. Feeling well, with three full meals a day with nourishment between breakfast and luncheon, and luncheon and dinner. At 9.30 the temperature was 104, having had another chill at 8.25, and at 6.30 in the morning the temperature dropped to 96.2. In spite of all this he slept very well during the night, nine and one-half hours being recorded. He was feeling good in the morning. During the day, Wednesday, thirty-first day, had subnormal tem-

perature, going from 96.6 to 97.6 all day long. He felt well, sleeping some during the day and wanted to sit up at night. Full diet all day, about five meals being administered. Thursday, thirty-second day, his temperature ranged from 99.2 to 101.6, no chill. Reported at night that he felt very much like himself all day. On Friday, thirty-third day, temperature ranged from 101 at 9.00 in the morning down to 100 in the afternoon. He sat up in the chair fifteen minutes. His blood-culture was taken.

On Saturday, 11th, thirty-fourth day, his temperature around 97.6 all day. Coca butter rubs were instituted at this time twice daily, hoping to improve his condition as he had lost extremely in weight during all this time.

Sunday, October 12th, thirty-fifth day, his temperature was 98.4 and 99. He slept all day from 10.15 in the morning until 5.15 in the afternoon, and awakened only once during the night. Monday, October 13th, thirty-sixth day, the temperature ranged from 97.2 to 98.8. Had autogenous vaccine, 1c.c., subcutaneously; report on blood-culture returned negative growth after three days. Tuesday, October 14th, thirty-seventh day, temperature 98.4 to 100.6. He slept well during the night and some through the day time. Full diet continued.

Wednesday, thirty-eighth day, temperature from 97 to 98, sitting up every day and today one hour. Thursday, temperature was normal. Friday, 17th, fortieth day, temperature from 98.4 to 100.2 at 3.00 in the afternoon, when he had a very slight chill, followed by hot flushes of the face and a hot feeling all over the body. Temperature dropped to normal at midnight. Saturday, forty-first day, temperature was 99.4 to 98.4. Sunday, October 19th, forty-second day, temperature normal all day, up in a wheel-chair taking a little ride in the corridors of the hospital. Monday, forty-third day, temperature from 97.8 to 98.6. Tuesday, forty-fourth day, temperature 99. Wednesday, forty-fifth day, normal temperature all day. Up in a wheel-chair each one of these days for a short ride. On Thursday, October 23rd, forty-sixth day, temperature was normal all day and he tried walking a few steps for the first time. Thursday, October 30th, fifty-second day, he left the hospital, having had practically a normal temperature for the past several days. The incision in the neck is entirely healed and the mastoid cavity almost filled in, there being still a small space to granulate over. At the present time the boy is at home eating

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ravenously, taking daily exercise and gaining in flesh rapidly. His facial paralysis has almost disappeared and apparently the young gentleman is a well man.

This case is reported, not because of brilliant surgical interference, or other attention, but as an example of what the human body can endure and overcome even under the most discouraging circumstances. It was not thought by any of those who had charge of the case or who were in consultation at any time that he could possibly live with the extensive thrombosis extending into the thoracic cavity. The presence of the very virulent hemolytic streptococci in the blood, together with the extent of the phlebitis, made it seem almost certain that he could not recover.

Very much credit should be given to Dr. Stouffer who prescribed for him through all the long and trying period. He watched him faithfully giving him such remedies as seemed to be indicated from time to time, and it is the belief of the writer, as well as of those who observed the case, that his care was a large factor in the recovery.

DISCUSSION.

GEORGE J. ALEXANDER, Philadelphia, Pa.: This seems to have been a desperate case from all appearances, but there were several things that were probably not considered which would have aided in making the case much more simple. In the first place there is associated with a well-developed sinus thrombosis a sort of putty-like, or clay color of the skin.

Another symptom, and one upon which Professor Alexander lays special stress, is restlessness at night. I have heard him say that he would not hesitate to make his diagnosis and operate with that one sign of sinus thrombosis complicating a mastoid disease.

Another point—I think it would possibly have cut the course of the trouble short and simplified the matter if the operator had laid bare the sinus at the time of the mastoid operation. I consider it so important to observe the condition of the sinus that it is more or less a routine with me, especially where there is the least suspicion of a threatening complication.

ALFRED LEWY, Chicago, Ill.: I think Dr. Myers' paper is exceedingly interesting. It shows how nature protects the organism

against infection; that after we have established adequate drainage, we have done everything we can, surgically, but beyond that we must use all the measures at our command to maintain the resistance of the patient to the infection. This resistance is the determining factor in all cases of infection, and the outcome of Dr. Myers' case bespeaks the very good general care given after the operation.

I do not agree with the proposition that jugular ligation should be done in all cases of sinus thrombosis, either before or after opening the sinus, nor do I believe that it is always necessary to reach the end of the clot, when it cannot be done easily. In the last few years I have had three (I believe it was three) cases in which I did not ligate the jugular, although the end of the clot could not be reached and free bleeding was not obtained, and they all recovered. Two other cases I recall—one, a boy, age about 12, was brought to the infirmary in very bad condition, requiring immediate mastoid operation. I had no history except that the boy had been ill three or four weeks, and no history of previous ear trouble. The lateral sinus was hard and shriveled, and on opening it a leather-like organized clot was found, the end of which could not be reached either toward the torcular or the bulb. The jugular was not ligated and the boy recovered. He must have had quite a while previously sinus thrombosis with spontaneous recovery.

Another case was that of a three-year-old girl on whom I performed a mastoid operation, finding an extradural (perisinus) accumulation of pus, but apparently a normal sinus wall. Her temperature was normal for a week, then began to fluctuate daily between subnormal and 106. I wanted to operate the sinus, but the parents refused to consent. She developed metastases to the knee and shoulder, but recovered fully without any further surgery in about five weeks.

I seriously doubt the advisability of ligating the jugular except in the presence of metastases. I am not sure that it is the best procedure to try to anticipate them by ligation of the jugular, believing that in most cases opening the sinus and draining the clot, obtaining free bleeding, if possible, without undue manipulation, is sufficient so far as the surgical work is concerned. But I also believe in the importance of remedial and general measures calculated to aid the patient's resistance.

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PHILIP RICE, San Francisco, Cal.: Is not this thing of ligating a jugular vein and leaving a thrombus distinctly contrary to the idea on which we have in recent times laid so much stress, namely, focal infection? It strikes me that it is. It is perfectly true that every thrombus is not septic. But can we, or do we, always determine when one is septic and when not? It seems to me that every time we leave one in a sinus we take a risk. Curetting is obviously not good surgery and should not be practiced. But what is the objection to irrigation? This I have done and with entire satisfaction. After ligating the vein as far down as is necessary, as well as the tributary veins, I make a slit above the ligature and irrigate from above. It is a simple, and, I believe, a reasonable procedure. There are no serious objections to be made against it, so far as I can see. It goes without saying that one naturally feels better satisfied when he knows that everything that may give rise to serious trouble has been removed.

As for remedies in this case reported by Dr. Myers, two suggested themselves to me while he was reading his report; the one was Ferrum phos. and the other was pyrogen. In the early stage of an otitis media Ferrum phos. comes as nearly being a specific as any remedy can be in any morbid process. No remedy has served me better, or even so well as this has. Pyrogen comes to mind always when hepar and silicea have failed to get the results. It should be thought of in these long drawn-out suppurative processes when the apparently indicated remedy fails.

RALPH I. LLOYD, Brooklyn, N. Y.: Am pleased, indeed, with Dr. Lewy's sanely conservative attitude. This is the day when radical opinions seem to be in vogue. In the difficult case which every now and then confronts us, too often the course is mapped out through the use of negative evidence rather than by positive conclusions. We are too apt to say that this is "sinus thrombosis" (let us say for sake of illustration), because it is not meningitis or brain abscess. In this process of reasoning, many causes, some general and not local in nature, are entirely overlooked. An irregular temperature may exist in suppurative ear conditions without sinus thrombosis, meningitis, brain abscess or other condition of like nature being present. There are cases of bacteremia where the port of entry is never found, and scarlet fever may exist without the faintest suspicion that it is the cause of trouble until your

patient begins to peel on the twenty-first day. The most careful analysis of the individual case must be made with the thought always in mind that some general condition may be the cause of the temperature.

Darwin states that the greatest lesson of his life was the demonstration early in his scientific investigations of the worthlessness of negative testimony. Positive testimony must be sought for in the doubtful and trying cases of ear infections. Recently, a case of double otitis media suppurative during scarlet fever came under observation, and while there were no local symptoms of mastoid involvement, some of the attendants applying the negative testimony concluded that all the temperature and sepsis must be due to the ear because they could find nothing else. Both mastoids were opened and found to be absolutely in a normal condition.

To do an operation in response to that feeling that something must be done is to do an operation that gets nowhere.

I do not wish to be misunderstood; am not disparaging operations, but rather prefer a good reason for the operation and a reasonable expectation that some good will come of it.

Sometimes it is wisest to do nothing, and am sure that the case for which the most credit is due some of us is the case in which we get the least or no credit from the family and others because we insisted that a good reason must be forthcoming before we would agree to further operating. As a result of this attitude taken and held in the face of strenuous opposition, have we not finally been sure that otherwise the little patient would have succumbed?

In this day of decidedly radical procedure, am more than pleased to hear a man of Dr. Lewy's experience suggest that conservative measures are not infrequently the best.

B. G. CLARK, New York, N. Y.: I think pyrogen is good—in all these cases it could be used as a remedy, but how any man can give arsenic album and apply ice, I don't see—arsenic and ice are just the opposite, and if one is helpful the other is not.

BURTON HASELTINE, Chicago, Ill.: I think in Dr. Myers' case we have missed a point. This was from the first a perfectly recognizable case of sinus thrombosis; Dr. Myers would have recognized it over the long distance telephone if some one had happened to get in touch with him, but Dr. Myers was not there.

AN UNUSUAL CASE OF SINUS THROMBOSIS

Dr. Alexander called attention to operation for sinus thrombosis if the patient was restless at night; of course, we all know that an operation should not be had on that one symptom. Another point, Dr. Dowling's patient recovered, but the fact that the patient got well did not prove that he was right. We would have a great many fatalities if we depended upon them all to do as Dr. Dowling's did; because the patient happens to be alive is by no means indicative that she had the proper treatment.

DEAN W. MYERS: Mr. President and members: I appreciate very much the discussion you have given this paper. I am somewhat surprised, however, that more of you have not followed Dr. Haseltine's example and removed your gloves. There can be no question but that this boy had sinus thrombosis at least about the day or next day following my departure for vacation. A point that has escaped the discussion also is the fact that this boy had an unusual amount of pain for the extent of the mastoid involvement. The temperature the day following the first operation was 104 degrees, but on account of the moderate condition of the mastoid and the gradual declining of his temperature the question of sinus thrombosis was passed over for the time being, and he having improved so decidedly at the end of the week it was believed that he was on the road to recovery and that possibly considerable of his temperature might be due to the eruption appearing upon the skin. This seemed to indicate the presence of a toxemia at least which might account for the temperature.

We were handicapped in getting the blood counts, cultures, etc., at the time, since it was vacation period and the laboratories were in charge of student help. Cultures were taken prior to those mentioned, but the first specimens were lost.

Some one asked if malaria was suspected; I wish to say that the blood was examined for the plasmodium of malaria and the return was negative.

CARREL-DAKIN SOLUTION IN CHRONIC MIDDLE EAR SUPPURATION.*

E. D. BROOKS, M.D.

Kalamazoo, Mich.

IN some of these cases the mastoid is undoubtedly affected and so diseased that nothing short of a mastoid operation will suffice for a cure. With that class of cases this paper has no dealing. The indications for such an operation are so well-known to all of us that it would be superfluous to rehearse them here. It is with those cases that plainly do not need such an operation or in which there is a reasonable doubt of its necessity, that we are at present concerned. Possibly the treatment hereinafter described would be as effective in middle ear catarrh, but up to this time I have not used it in that condition. Having no hospital or clinic connection, the number of cases of chronic middle ear suppuration coming under my care is not large.

My first experience with this method was in the case of a returned soldier who had had his tympanic membrane ruptured by the near-by explosion of a T. N. T. shell, which at the same time gave him a case of shell-shock. After undergoing treatment in Government hospitals for some months, both in France and in the United States, he was invalided home to a little village tributary to Kalamazoo, and I was selected to continue the case.

His general condition was anything but promising. His pulse-rate was 150, his mental condition markedly depressed, he was easily exhausted from slight exertion and he was decidedly "jumpy." His appetite was capricious and his sleep much disturbed. There was a free discharge of sero-pus, rather foul, but not of the odor of decaying bone. There was some tenderness over the mastoid but no swelling or other symptoms of mastoiditis calling for operation. The meatus externus was so sensitive to touch that I had difficulty in wiping out the discharge.

After treating it by the dry method a few times and seeing no satisfactory results, I was led by the reports of the success in

* Presented at the Annual Meeting of the O., O. & L. Society, Cleveland, O., June, 1920

treating open wounds with the C. D. Solution, to try what it would do for a suppurating tympanum. After freeing it of the discharge as well as I could with a cotton-wound probe, I placed the head with the diseased ear uppermost, filled it with the solution, allowed it to remain five minutes, and plugged the meatus with a wad of cotton, to remain in place a few hours.

At his next visit, a week later, there was a decided decrease in the amount and an improvement in the odor of the discharge, and from that time there was a progressive change for the better, only three or four treatments being needed to bring about an entire cessation of the discharge.

Since August 13, 1919, there has been no return of the trouble. How much earlier the result could have been achieved could he have had daily instead of weekly care can only be surmised. My orders were to treat him once a week. In the treatment of wounds continuous application of the solution is the practice.

His general condition gradually and steadily improved, until at the end of three weeks after the disappearance of the discharge from the ear the pulse-rate had dropped to around 100, his strength and vigor were nearly normal and he wished to take up vocational training, to which I gave my assent.

The drugs used were puls., rhus. and kali phos, as indicated.

In several cases treated since then the results have been highly satisfactory, the rapidity of improvement depending largely upon the thoroughness with which the application to the diseased surfaces could be made. In the case cited the membrane was largely destroyed, giving free access to the tympanum and rendering the treatment comparatively simple. In most cases the perforation is smaller, so that often the solution remains in the meatus externus and does not enter the tympanum in sufficient quantity to accomplish the desired end. In seeking a way to overcome this difficulty I hit upon the expedient of placing the tube of an atomizer bulb firmly in the meatus and gently forcing the solution with which the meatus had already been filled into the middle ear. When the tympanum has become filled in this way a portion will escape into the posterior nares, of which fact the patient will notify you.

Acute cases seem to respond as readily to this treatment, though one cannot be so certain that the treatment is to be credited with the cessation of the discharge, as acute cases tend to recovery under any or no treatment. There may be nothing new to the

members of this society in this paper, as "There is nothing new under the sun." I only know that it is new to the author of this paper.

Those of you who had the privilege of doing army or reconstruction work may have found a better way. If so, we who were denied that favor are hoping to profit by your experience.

704 Hanselman Building.

DISCUSSION.

WILLIAM G. SHEMELEY, JR., Philadelphia, Pa.: Dr. Brooks is to be congratulated for having secured such excellent results with Carrel-Dakin Solution in chronic middle ear suppuration. In 1916 I experimented both with the solution and with the paste of Carrel-Dakin formula without beneficial results. My experience with it in the army has not changed my views regarding its use.

The army surgeons demonstrated that in order for Dakin's Solution to prove of value in the treatment of chronic suppuration all the portions of the abscess cavity should be readily accessible to its action. Next, the use of the solution must be repeated frequently, for its antibacterial power soon wears off. But on the other hand Dr. Brooks cites several cures.

I should like to ask the doctor several questions concerning the cases: First, just what were the otoscopic appearances of the ears, especially in the case of the soldier? Second, what was the character of the treatment he had received previous to consulting the doctor? Third, after cleansing the ear and inflating with the Politzer bag did secretion come up from the region of the tube? Fourth, what was the nature of the treatment that the patient used between visits?

Concerning the method of forcing the solution into the tympanic cavity in those cases in which the perforation is small, I feel that I can not advocate the method for several reasons:

(a) It is unsurgical to treat any abscess through an opening that is recognized as being too small to provide adequate drainage.

(b) Dakin's Solution has not such a powerful antibacterial action that it absolutely removes all danger of conveying infected particles into regions where they may cause more serious trouble.

To sum up, experience has taught me that:

1. Carrel-Dakin Solution does not offer any advantages in

the treatment of chronic middle ear suppuration not afforded by the usual methods.

2. Any acute suppurating otitis media that continues to discharge over two months, in spite of treatment, providing that treatment is of the proper nature and the aurist is satisfied that it has been properly carried out, depends for its chronicity upon involvement of structures requiring radical operative interference. Those cases that recover without operation are dangerous exceptions for the otologist, for by them he may be misled into the use of conservative measures in cases that could never be benefited by such form of treatment.

The discussor realizes that this sounds like an extremely pessimistic attitude, but it is the result of having observed, in the majority of cases, the calamity that follows the use of conservative treatment in just such a type of case as the doctor has cited.

EYE SIGNS IN EXOPHTHALMIC GOITER.—1. Exophthalmos or proptosis. (Cause disputed: retrobulbar venous congestion, increase in orbital fat, permanent contraction of Landstrom's muscle from thyrotoxis of the sympathetic).

2. Dalrymple's Sign: A separation of the lids, due to protrusion of the eyeball forward; a band of sclera seen between the edge of the lids and the edge of the cornea.

3. Graefe Sign: Lagging of the upper lid in relation to the downward motion of the eye.

4. Stellwag Sign: Infrequency in blinking of the eyes.

5. Gifford Sign: Difficulty in everting upper lid.

6. Rosenbach Sign: Trembling of the upper lid on closing the eye.

7. Tache Cérébrale on the upper lids.

8. Pigmentation of the lids.

9. Loss of eyebrows and eyelashes.

10. Arterial pulsation of the retina (Becker).

11. Enlarged pupils.

12. Insufficiency of combined convergence.—Claiborne, *J. A. M. A.*, Sept. 25, 1920. D. M.

SOME INTERESTING CLINICAL CASES.*

HARRY M. SAGE, M.D.,

Columbus, O.

DURING the past two years we have had under observation a series of cases, interesting to us not only from their unusual pathology, but also because of the family relationship. In our reading we have yet to find reported a similar series, and I am reporting this as much for my own enlightenment as for your perusal.

There are four cases in the series; one of them we have been able to study rather in detail, two we have examined hurriedly, and of one we have only received our patient's description.

The patient, a boy aged 17, was first seen by us in January, 1919, and gave the following history: Six months previously the left eye became suddenly blurred, and reading had been impossible since that time. There had been no pain, redness or other objective or subjective symptoms since that time. Five days previously the right eye also became suddenly blurred and has remained so since that time. There were no other symptoms.

Previous to this time he had had tonsillitis, measles and mumps. He also admitted a moderate amount of sexual abuse. His father was living and well, except some slight rheumatism. His mother was living and well. There were living two sisters and a brother, all well, except one sister who had a period of blindness, but was at the time working in an office.

From the eye examination the following was noted:

R. E. Conjunctiva normal, cornea normal; iris brown and normal; pupil five mm. in diameter, round, and reacted both to light and accommodation; tension normal; media clear; disc was pale and the vessels, though proportionally filled, were thin; could count fingers at three feet; color perception normal. Test of the visual field revealed no definite scotoma but central vision seemed poorest; retina was pale but showed no areas of inflammation or degeneration.

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L. E. Conjunctiva normal; cornea normal; iris brown and normal; pupil large but reacted both to light and accommodation; tension normal; media clear; temporal side of the disc was white and atrophied, nasal side normal. There was also a definite pigment ring on the temporal side of the disc; arteries were rather thin; retina was normal; perimetry showed an absolute central scotoma of about 20 degrees, the peripheral field was normal both to colors and objects.

Nothing was found in a general physical examination except a mitral murmur. The Wassermann reaction was reported negative on repeated tests, as were all other laboratory examinations.

The patient remained under our observation and also under the influence of homœopathic drugs, and some that were not homœopathic, but the better eye rapidly grew worse until in about three months an absolute central scotoma of about 20 degrees existed. The eye first affected grew no worse. The appearance of the right optic disc gradually grew paler until the temporal side became the gray-white of atrophy. The nasal side remained normal in color.

In the meantime the patient brought in for examination his sister, who had had trouble with her eyes. She gave the following history: She had had the usual diseases of childhood but nothing of seeming importance. At the age of sixteen, she had developed blurred vision very similar to that of her brother; the two eyes became affected at nearly the same time, and the disease progressed so rapidly that in a few months she was unable to read and was obliged to leave school. However, at no time was she completely blind. The vision remained unchanged for about four years, when she again was able, by holding her book very close, to read.

Objectively a marked lateral nystagmus was noted. The external portions of the eyes were normal, except that the pupils were rather large and reacted sluggishly to light. Ophthalmoscopic examination in both eyes—clear media and a gray atrophy of the disc on the temporal sides. The vessels and retinæ were normal. Perimetry showed, as in the case of her brother, the absolute central scotoma, although rather larger than in the former case. As I have stated previously, she was able to see some in spite of the fact that there seemed to be a central blindness. On account of the marked nystagmus, mapping of the field was difficult, and it is possible that there may have remained a small central field of vision,

but we could not be sure of it. Rather, we attributed the small amount of vision to her holding her reading matter very close to the eyes, therefore enlarging the retinal image sufficiently so that with the aid of nystagmus there was enough to produce the mental picture.

At the time of our examination of this case the condition had existed about five years, with no change after the first few months except the development of the nystagmus. During the early stages of the disease she had been treated by a man of no mean ability, but with no results, and according to the patient, without determining the cause.

Recently there came to us a third patient, a cousin of the previous two, complaining of the same difficulty. He is a man thirty years of age and had been unable to read since he was seventeen. The onset and progress of his case had been similar in detail to that of the other two. The optic nerves showed the same temporal atrophy, the retinas were normal and the fields gave the same central scotoma. Physical examination and Wassermann reaction were negative.

The fourth case, another cousin, but of a third family, we did not see, but the other patients described it as being very similar to theirs, the onset occurring at about the same age.

The four cases represent three families, the mothers of which are sisters. In the maternal family there were six sisters all bearing children, impaired vision occurring in three of the families. As far as we were able to ascertain there had been no previous eye-trouble in the family, and no other stigma.

It may be of interest to note in the case we have personally followed, that within the last six months his vision has so improved that he is able to read twenty-thirtieths with each eye. The area of functioning retina, however, is very small, he being able to see only about two letters of the twenty-thirtieth at a time. He is also able to see very fine print. There has been no visible change in the appearance of the discs.

Another case of rather unusual pathological sequence is that of Mr. E. H., 39 years of age, married, white, a meat cutter by occupation. He appeared in the University Clinic January 6th of this year, giving the following history: Father and mother living and well; father rheumatic, one brother living, one brother died in infancy, one sister living; no history of T. B. or syphilis in

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family. Patient has had rheumatism in both legs, said to have a sluggish liver, typhoid three years ago, has had measles and chicken-pox. Has had arsenic injection for syphilis and has had gonorrhea.

He came to us complaining of headache of two months' duration. Fullness of the nose, necessitating mouth breathing; buzzing in ears; difficulty in tasting food. The headache was preceded by an acute coryza. Also complaining of insomnia; frequent urination at night; bowels irregular.

Upon examination of the nose the septum was found to be deflected to the left, the mucosa was dark red in color, rather granular in appearance, very much thickened so as to occlude almost entirely both nares. A thick mucus discharge was present.

The whole picture was that of syphilis and consequently a Wassermann was done and the patient was put on massive doses of Pot. iod. In due time the Wassermann was reported negative, and the patient grew rapidly and progressively worse, along with the other symptoms developing a pain in the right maxillary region. A radiograph was then made of the sinuses which confirmed the maxillary symptoms by showing dullness in the region. An intra-nasal puncture was made and a quantity of straw-colored fluid was drawn off. This procedure was accomplished with some difficulty on account of the very small space in the nose through which to work. Irrigations of the antrum did not relieve the pain in that region so it was decided to open the sinus externally. The cavity was partially filled with the same straw-colored fluid, and the lining mucosa was very much thickened, similar to the nasal mucosa, but no pus was present. Throughout this period the headache and all nasal symptoms continued.

In the meantime he had been discharged from the hospital and was returning at intervals for treatments. On February 9th he reported, complaining of his vision being blurred; with left eye he could not see a man at eight feet. There were no spots before the eyes at that time but there had been white rings before the eyes. The scalp was tender on pressure and the patient was dizzy on stooping.

Externally the eyes appeared normal, except that the left pupil reacted slowly to light-stimulation. The media of the two eyes were clear. The left nerve-head was very slightly injected, otherwise the eye-grounds of the two eyes were normal. In the left eye the patient had light perception in a small central area only.

The patient re-entered the hospital and the case was completely reviewed. There was no change in the local findings. The laboratory diagnostician made the following report:

BLOOD FINDINGS: Blood shows no particular loss of hemoglobin or reds; white blood cells increased 10,850, but differential normal and no pathological forms found.

URINARY FINDINGS: Analysis of several samples shows a heavy trace of albumin, a few casts, slightly lowered urea and an ammonia-urea relation varying from 1.15 to 1.23. No acetone or diacetic acid. This report shows a mild degree of acute nephritis with a lowered ammonia-urea relation due to a slight alkaline depletion (acidosis). Serum reactions—Wassermann taken some weeks ago was negative, but last Wassermann showed four plus to all antigens.

X-RAY FINDINGS: X-ray pictures show up well the sella turcica, cribiform plate, optic foramen and all sinuses of the head; the fogged right antrum of earlier plates seems to have cleared since operation. The sphenoid sinus seems hazy.

SUMMARY OF REPORT: Patient suffers from mild degree of myocarditis and acute parenchymatous nephritis. Also has syphilis. Eye symptoms must be accounted for by local pathology in sphenoid sinus or in brain box.

During the short space of time that this diagnostic work was being done the patient became absolutely blind in both eyes. After the light was completely shut off in the left eye the temporal field of the right began to contract, followed by the nasal field, until the entire field was eliminated. At no time did the eye-ground show more than a slight injection of the discs.

Upon having the earlier clinical diagnosis confirmed by the Wassermann the patient was given nineteenthths gram of neosalvarsan, repeated every five days until seven doses were given. In the meantime supplementary treatments of mercury inunctions were given.

On the fourth day after the first arsenic injection vision began to re-appear in the nasal field of the right eye and there seemed to be some clearing of the nasal fossae, by which symptoms we were prompted to follow up the treatment vigorously. At the completion of the arsenic treatment he was put on mercury internally, which medication he is still receiving.

As the nasal mucosa began to decrease in thickness after about

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two weeks of treatment, there developed a very offensive odor from the patient's nose, and still two weeks later a portion of the perpendicular plate of the ethmoid was removed with forceps. This necrosis has continued, until at the present time there has been removed practically all the perpendicular plate of the ethmoid, the plate of the vomer, a portion of the hard palate and a portion of the anterior wall of the sphenoid. His vision has improved until the field in the right eye is normal to light and vision is twenty-thirtieths; the nasal field of the left eye has returned but the temporal field, including the macula, is still absent. The patient is feeling fine and is again cutting meat.

This case seems of more than passing interest to me for two reasons: First, it is an unusual way for syphilis to produce optic neuritis, and suggests some of the consequences coincident with hyperplasias of the sphenoid and ethmoids. It also raises the question whether our working relation with the laboratory is what it should be. Had we at first treated vigorously according to the clinical diagnosis we would no doubt have saved our patient the inconvenience of an operation and also the use of an eye.

THE FATE OF THE FRIEDLANDER BACILLUS INTRODUCED INTO THE UPPER AIR PASSAGES.—Bloomfield continues his experiments with the various micro-organisms and their effects upon the normal mucous membranes. This time he deals with the Friedlander bacillus and presents the following conclusions:

1. Friedlander bacilli freshly isolated from various sources were introduced into the normal upper air passages without producing local or general disease.

2. The organisms disappeared rapidly—usually within twenty-four hours.

3. It was not possible artificially to produce a carrier state.

4. The bacteria are removed by mechanical means.

5. This group of organisms when associated with disease usually act as secondary invaders.—*Johns Hopkins Hospital Bulletin*,; Abstr. *Hahn. Monthly*, Oct. 1920. D. M.

THE CAUSES OF HEMORRHAGE AT THE TIME OF TONSILLECTOMIES.*

FRANK A. HOWLAND, M.D.,

Adrian, Mich.

IT has been after considerable hesitation on my part, having so recently become a member of this society, that a discussion of this subject has been undertaken. It would seem from the numerous articles written for the medical and surgical journals throughout the country and the many discussions at the meetings of county, state and national societies, that every thought on the subject of tonsils had been exhausted, and that there remained nothing to say regarding them, healthy or diseased—no new remedies to suggest, which have not been thoroughly tested on inflammatory or other diseased conditions of the tonsils supposed to be amenable to internal medication, not even a ghost of a show to invent some new instrument to be used for the removal of tonsils; for, as you all know, the number of instruments now on the market is nearly as great as the number of tonsils themselves. Neither does there seem to remain any new operative technique to be suggested.

But, to go back to the subject:

In performing tonsillectomies there are at least two main objects always in the mind of the throat surgeon:

FIRST.—The complete removal of all the tonsil tissue.

SECOND.—To leave all the soft parts surrounding the tonsils, that is, the anterior and posterior pillars of either side, as well as the uvula and soft palate, in perfect condition, and thus avoid operative or post-operative hemorrhage.

In regard to the first objective, I think we are all agreed as to it being the only correct method to follow, and that by a partial removal of the tonsils we almost invariably have a hemorrhage at the time of operation as well as after the patient has gone to his room, thus causing a needless amount of trouble for his nurse and the house doctor.

The remaining tonsil tissue is always more or less mutilated,

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leaving a wound very slow to heal, bleeding for some time following the operation, quick to absorb the poisons from the rough, sloughing surfaces, thus causing many of the post-operative complications and subjecting the patient to an unnecessary amount of suffering from the ears, muscles, joints, heart, etc.

This is the reason we frequently hear patients say: "I was unable to eat or talk, and so weak from the loss of blood, that I was not able to be out of bed for a week." And he is thoroughly disgusted with the whole procedure.

As to the second objective, there is no definite method of determining the amount of disturbance caused the patient in speaking, singing or swallowing, when the soft parts surrounding the tonsils are cut away or badly mutilated, nor the amount of deformity resulting from such operative procedure. These soft parts are also the source of some of our most distressing hemorrhages.

For the past ten years it has been my custom to observe these cases, many of them giving a history of having the tonsils removed once, twice and even a third time, and always with a severe loss of blood.

From these observations it has become a routine practice never to undertake a tonsillectomy without first thoroughly inspecting the tonsils themselves, then the pillars, the pharynx and soft palate, for enlarged or anomalous blood vessels.

If you will follow the same plan of first inspecting these parts you will be surprised at the frequency of a pulsating tonsil, a pillar or an adenoid mass.

One or two cases will serve to illustrate this idea a little more clearly.

The first case was that of a young man about eighteen years of age who complained of having frequent trouble with his throat. Upon careful examination it was found that both tonsils were markedly hypertrophied, left one presenting quite a distinct pulsation; no blood vessel was visible, but from the strength of the pulsation it seemed as though it might come from the internal carotid artery.

When this case was operated a careful dissection was made between the anterior pillar and the tonsil, following around the external surface, separating the tonsil in the capsule from the pharyngeal aponeurosis and removing it entirely. Upon inspection of the tonsil fossa, the pulsations were found to come from an

artery, at least four millimeters in diameter, located at the base and posterior surface of the anterior pillar.

In this case the enlarged artery is the posterior branch of the descending palatine artery. Had this artery been severed through a hurried or careless dissection, it might have caused a very troublesome if not a serious hemorrhage.

The second case was that of a boy about 14 years of age, giving a history of repeated attacks of tonsillitis. There was some involvement of the ears; tonsils enlarged; crypts distended from accumulations of decayed food and epithelial cells.

After a careful examination there was noticed, beside the conditions mentioned, a marked pulsation of the posterior pillar of the left tonsil and left side of the pharynx. When the tonsil was removed completely and the fossa well inspected, no enlarged blood-vessel was found in any part of the tonsil fossa, but after the removal of a mass of adenoid tissue the artery was found under this mass, just at the margin of the posterior pillar.

In this case the artery was the pharyngeal branch of the ascending pharyngeal artery, enlarged beyond all reason.

Without a doubt the most frequent site of arterial hemorrhage is at about the middle of the sinus tonsillaris, where the tonsillar branch of the facial pierces the superior constrictor muscle of the pharynx. Other points of hemorrhage are usually from the inferior portion of the sinus tonsillaris, where the tonsillar venous plexus is located.

If we will but call to mind the fact that three of the arteries, the tonsillar, the ascending palatine, and the ascending pharyngeal, pass upward on the outside of the superior constrictor muscle, turn inward, pierce the muscle, break up into several small branches just before entering the tonsil and the faucial pillars, it will be evident that if these small arterial branches are severed as they enter the capsule of the tonsil the danger of hemorrhage is very small; but, on the other hand, if, as quite often happens through lack of experience, or lack of knowledge of the anatomy of the part, the operator, instead of dissecting the tonsil out in the capsule, carries his dissection still deeper through the pharyngeal aponeurosis, the superior constrictor muscle, and severs these arteries before they break up into small branches, then the danger of hemorrhage is great and perhaps serious.

Now I do not mean to convey the impression that a hemor-

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rhage occurs with every tonsillectomy, or that the physicians who have made a special study of this kind of surgery are having these hemorrhages at or following their operations; for they very seldom have them occur, even with enlarged or anomalous blood-vessels; but it is with that class of so-called (or I might say self-called) surgeons who can perform any kind of operation that these cases occur and by whom all this throat mutilation is done.

I believe the layman is fast becoming aware of these facts and that the time is fast approaching when all this class of surgery, as well as that of any special line, will pass into the hands of those abundantly qualified to do it.

OPERATIVE TREATMENT OF OTITIS WITH SCARLET FEVER.—S. T. Sphrensen, *Hospitalstidende*, Copenhagen; Abstr. *J. A. M. A.*, July 28, 1920. The evil results following an extensive mastoid or other operation for scarlatinal otitis and its complications were confirmed by the author. However, he reports 57 suppurative cases in which the periauricular abscess healed after simple incision. After citing three cases which were fatal after the extensive operation, and three which recovered after the extensive operation, the author warns against operating before symptoms develop.

H. L. G., Jr.

DIPHTHERIA IMMUNIZATION.—A. H. Bosler, *Illinois Medical Jour.*; Abstr. *J. A. M. A.*, Oct. 2 1920. The author found 26 cases out of 68 positive to the Schick reaction among adults. Among children, aged from 3 to 14 years, fifteen were positive. Among 50 nurses 23 were positive. The injections were made in the arm and three injections were given at seven-day intervals. The only case giving a positive Schick reaction on retesting after one-and-a-half years was one that reacted slightly to the mixture. The author found that the local reactions in adults were for the most part severe.

H. L. G., Jr.

ABSTRACTS.

RADIUM IN NOSE AND THROAT THERAPY.—An excellent review of the literature on radium in the treatment of malignant tumors of the nose and throat, appears in the article by Robert Sonnenschein, of Chicago, in the *Journal of the American Medical Association*, Sept. 25, 1920. Being a paper read at the section meeting of the American Medical Association, it is reported with the discussion. The references alone make the paper a valuable monograph. Following are the conclusions:

1. The future of radium therapy seems very bright, particularly in reference to applications in tumors of the nose and throat; but great caution is advisable in statements regarding actual cures. It is important to watch for recurrences during a period of from two to five years.
2. In reporting cases, authors should give details of the preparation used, the method of application, duration of exposure, etc., in radium treatments.
3. Following up the cases and reporting on them again whenever possible is of the utmost importance in the formulation of definite conclusions regarding the results of radium treatment.
4. Radium is probably of great value before, and certainly after, operations. It is very efficient in relieving pain, hemorrhage, discharge, etc., in many inoperable cases.
5. Sarcomas are especially responsive to radiation; the carcinomas yield much less readily, and the squamous type of epithelioma is scarcely amenable to radium at all.
6. Complications, at least those reported, are not so frequent as one would be likely to expect. Burns were the most common ones, but even death may result from toxemia.
7. Radium has many advantages as compared with roentgen rays, especially for application in the nose and throat.
8. The diagnosis of the malignant cases should be made by a competent laryngologist, and the radium applied either by him or in co-operation with a radiologist. Only in this way will correct statistics and reliable results be obtained, with greatest benefit to the patient and the safest guidance to the profession. D. M.

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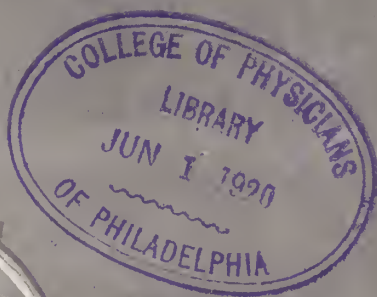
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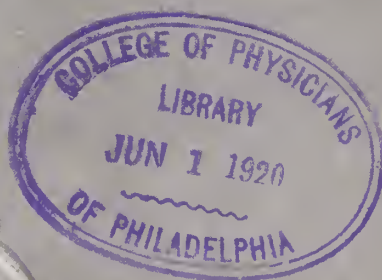
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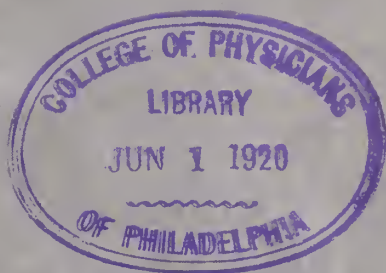
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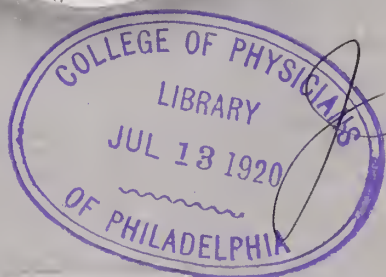
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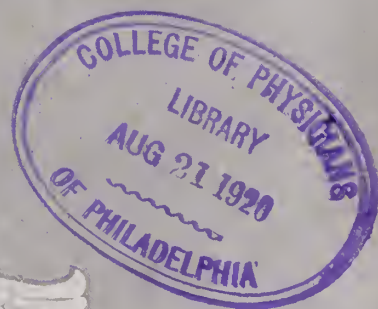
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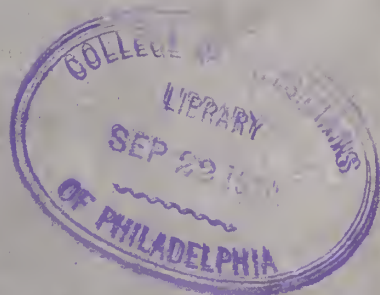


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